
BUTTER, CHEESE, AND CONDENSED MILK

BUTTER, CHEESE, AND CONDENSED MILK.

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This report contains (1) a statistical discussion of the manufacture of butter, cheese, and condensed milk in the United States and in the various states, and the foreign trade in butter and cheese; (2) a discussion of milk products and by-products.

Prior to 1905 the manufacture of butter, cheese, and condensed milk was presented in the Census reports as one industry. At the census of 1905 returns were made as for separate industries, and the statistics for each industry are presented in detail in Tables 10, 11, and 12 at the end of this report. As it was impracticable to separate the industries for former censuses, the statistics for 1905 have been combined in all tables

where comparisons are made with previous censuses. In comparing the statistics for the censuses of 1880, 1890, 1900, and 1905, a few limitations should be kept in mind. The censuses before 1905 include statistics of some establishments engaged primarily in selling milk and cream that made some butter or cheese, while for the census of 1905 statistics for only such establishments as were engaged primarily in manufacturing butter, cheese, or condensed milk are included. Plants engaged only in separating cream from milk were not regarded as engaged in manufacturing.

A general view of the growth of the industry in the United States is given in Table 1.

TABLE 1.—BUTTER, CHEESE, AND CONDENSED MILK—COMPARATIVE SUMMARY, WITH PER CENT OF INCREASE FOR EACH CENSUS PERIOD: 1880 TO 1905.

	CENSUS.				PER CENT OF INCREASE.			
	1905	1900	1890	1880	1900 to 1905	1890 to 1900	1880 to 1890	1880 to 1905
Number of establishments.....	8,026	0,242	4,552	3,032	13.4	103.0	15.8	127.0
Capital.....	\$47,255,550	\$36,303,104	\$10,016,573	\$0,004,803	30.2	120.7	60.8	392.0
Salaried officials, clerks, etc., number.....	3,607	2,818	2,150	(¹)	24.4	31.1	.....	.....
Salaries.....	\$1,376,007	\$911,712	\$807,151	(²)	50.0	5.1	.....	.....
Wage-earners, average number.....	15,557	12,700	12,210	7,003	21.5	4.7	74.6	96.8
Total wages.....	\$8,412,037	\$6,145,561	\$4,248,854	\$1,546,495	36.0	44.0	174.7	444.0
Men 16 years and over.....	14,030	11,637	11,420	6,410	20.6	1.8	78.0	118.7
Wages.....	\$7,070,247	\$5,838,080	\$4,102,462	(³)	36.5	42.3	.....	.....
Women 16 years and over.....	1,405	1,041	1,000	1,330	35.0	50.0	148.1	5.0
Wages.....	\$421,033	\$280,190	\$135,426	(⁴)	45.0	113.5	.....	.....
Children under 16 years.....	110	121	100	154	14.1	21.0	135.1	124.7
Wages.....	\$20,757	\$17,382	\$10,000	(⁵)	10.4	58.5	.....	.....
Miscellaneous expenses.....	\$4,074,208	\$1,574,700	\$813,054	(⁶)	158.7	93.5	.....	.....
Cost of materials used.....	\$142,020,277	\$108,841,200	\$40,810,301	\$18,363,570	31.3	118.5	171.3	678.3
Value of products.....	\$108,182,780	\$130,783,340	\$60,035,705	\$25,742,510	28.0	115.7	135.5	553.3

¹ Decrease.

² Includes proprietors and firm members, with their salaries; number only reported in 1900 and 1905, but not included in this table.

³ Not reported separately.

⁴ Not reported.

The industry during the last quarter of a century has had a remarkable growth, increasing over five-fold in value of products. With this large gain and that in the cost of materials, it is interesting to compare the smaller increases in the number of establishments, 127 per cent, and in wage-earners, 96.8 per cent, as an indication of the condensation of the industry and of the use of labor saving machinery. The percentage for the increase in the number of wage-earners is not strictly accurate, as in 1880 the number of salaried officials, etc., was not reported separately.

If, however, in order to make a comparison, the two items are combined in 1905, the increase is only 141.2 per cent. The larger increase in wages, still further augmented by including in the figures for 1905 the wages or salaries paid to officials and clerks, is caused not only by higher wages, but, as the decrease in children shows, by a change in the kind of workmen. The average amount of capital invested per establishment has grown from \$2,443 in 1880 to \$5,294 in 1905, and the average value of products from \$6,547 to \$18,842. The period of the greatest relative increase in value of

products was in the decade ending with the year 1890. It was during this decade that the centrifugal separator came into general use, giving a great impetus to the establishment of butter factories or creameries.

From 1890 to 1900 the industry advanced rapidly, and during the last five years its growth has been substantial and healthy. In the period from 1900 to 1905, however, the number of establishments decreased from 9,242 to 8,926, a loss of 316, or 3.4 per cent. There are two reasons which may be given in explanation of this decrease. One was the organization of large creameries by the consolidation or absorption of smaller plants. This centralization was hastened by the hand separator. As cream can easily be hauled great distances, the separator made the farmer independent of the nearby creamery to which he formerly delivered his milk, and also made it possible for a single creamery to extend its purchases of raw material over a large territory. The larger plants, which manufactured butter at less expense and thus being able to sell at a lower price, gradually crowded out or absorbed the smaller plants. The second reason for the decrease was that many factories voluntarily abandoned the manufacture of butter and cheese for the purpose of engaging in the sale of milk and cream.

TABLE 2.—Butter, cheese, and condensed milk—quantity and cost of materials used, with amount and per cent of increase: 1905 and 1900.

	1905	1900	INCREASE.	
			Amount.	Per cent.
Materials used, aggregate cost.....	\$142,920,277	\$108,841,200	\$34,079,077	31.3
In making butter:				
Total cost.....	\$96,113,391	\$73,489,355	\$22,624,036	30.8
Milk—				
Pounds.....	8,393,098,823	8,514,806,634	121,707,811	1.4
Cost.....	\$67,742,351	\$65,335,287	\$2,407,064	3.7
Cream—				
Pounds.....	588,186,471	203,673,958	384,512,513	188.8
Cost.....	\$28,371,040	\$8,154,068	\$20,216,972	247.9
In making cheese:				
Milk—				
Pounds.....	3,026,755,225	2,741,898,114	284,857,111	10.4
Cost.....	\$23,516,725	\$21,258,712	\$2,258,013	10.6
In making condensed milk:				
Total cost.....	\$11,786,561	\$7,262,124	\$4,524,437	62.5
Milk—				
Pounds.....	727,450,502	421,378,073	306,072,429	72.6
Cost.....	\$8,470,669	\$4,662,437	\$3,808,232	81.7
Sugar—				
Pounds.....	67,810,031	50,873,859	16,936,172	33.3
Cost.....	\$3,315,892	\$2,589,687	\$726,205	28.0
Fuel.....	\$2,297,335	\$1,708,634	\$588,701	34.5
Rent of power and heat	\$49,060	\$17,285	\$31,775	183.8
All other materials.....	\$9,157,205	\$5,115,090	\$4,042,115	79.0

¹ Decrease.

Establishments engaged in industries other than those specified reported materials valued at \$505,340,

from which butter and condensed milk valued at \$520,317 were manufactured. These establishments, materials, and products are included in reports on other industries and are therefore omitted from the tables in this bulletin.

Table 2 shows the quantity and cost of materials used in the manufacture of butter, cheese, and condensed milk in 1900 and 1905, with the amount and percentage of increase.

The decrease in the quantity of milk and the increase in the amount of cream used in the manufacture of butter are due to the same cause. Many farmers who formerly delivered milk at the separating stations of the factories now deliver cream only, the hand separator making it more economical to separate the cream and milk on the farms. The great increase in the price of cream is accounted for by the tendency of farmers near large cities to sell their milk and cream to milk dealers. In this way the supply offered to the factories has been curtailed and the price consequently increased.

Table 3 shows the quantity and value of products for 1900 and 1905, with the amount and per cent of increase.

TABLE 3.—Butter, cheese, and condensed milk—quantity and value of products, with amount and per cent of increase: 1905 and 1900.

	1905	1900	INCREASE.	
			Amount.	Per cent.
Products, total value.....	\$168,182,789	\$130,783,349	\$37,399,440	28.6
Butter:				
Pounds.....	531,478,141	420,126,546	111,351,595	26.5
Value.....	\$113,189,453	\$84,079,754	\$29,109,699	34.6
Cheese:				
Pounds.....	317,144,872	281,972,324	35,172,548	12.5
Value.....	\$28,611,760	\$26,519,829	\$2,091,931	7.9
Condensed milk:				
Pounds.....	308,485,182	186,921,787	121,563,395	65.0
Value.....	\$20,149,282	\$11,888,792	\$8,260,490	69.5
All other products.....	\$6,232,294	\$8,294,974	\$2,062,680	24.9

¹ Decrease.

The great proportionate increase in both the amount and value of condensed milk is a noticeable feature of this table. Statistics for this industry are discussed at greater length on page 313. The data for the butter and cheese industries are also discussed more fully in the following pages of the report.

Table 4 is a comparative summary of the principal items of the butter, cheese, and condensed milk industry, by states and geographic divisions, for the censuses of 1900 and 1905.

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TABLE 4.—BUTTER, CHEESE, AND CONDENSED MILK—COMPARATIVE SUMMARY, BY STATES, TERRITORIES, AND GEOGRAPHIC DIVISIONS: 1905 AND 1900.

STATE OR TERRITORY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS AND WAGES.		Miscellaneous expenses.	Cost of materials used.	Value of products.	Rank.
				Number.	Salaries.	Average number.	Wages.				
United States.....	1905 1900	8,026 9,242	\$47,255,556 36,303,164	3,507 2,818	\$1,370,097 911,712	15,557 12,799	\$8,412,937 6,145,661	\$4,074,268 1,574,700	\$142,920,277 108,841,200	\$108,182,780 130,783,349	..........
North Atlantic division.....	1905 1900	2,826 3,202	15,251,650 12,847,263	797 651	364,840 273,810	5,001 4,530	2,536,146 2,140,215	1,057,480 610,537	46,616,798 41,027,176	54,176,814 48,485,063	..........
Maine.....	1905 1900	46 61	385,365 420,510	24 30	8,923 10,046	78 102	47,393 70,283	40,497 23,065	1,045,356 1,407,050	1,220,978 1,727,084	19 13
New Hampshire.....	1905 1900	34 53	163,256 311,308	20 34	6,188 11,490	63 110	36,452 58,323	21,078 21,220	730,380 1,226,388	864,100 1,407,503	22 14
Vermont.....	1905 1900	220 254	1,053,360 1,139,988	133 135	29,951 35,405	419 486	223,254 222,042	60,898 60,392	5,815,077 4,772,002	6,416,434 5,500,545	9 7
Massachusetts.....	1905 1900	36 50	210,557 324,382	47 24	0,330 12,513	64 90	40,803 61,636	11,830 15,240	778,851 1,024,575	876,058 1,108,159	21 16
Rhode Island ¹	1900	3	7,800	4	1,125	9	3,427	628	28,038	30,569	35
Connecticut.....	1905 1900	41 71	150,447 274,733	28 47	15,280 24,402	95 100	57,155 84,893	24,361 21,200	670,321 881,614	814,703 1,003,703	23 18
New York.....	1905 1900	1,796 1,908	6,066,426 7,084,130	215 227	102,400 122,202	2,868 2,430	1,485,072 1,167,081	576,240 337,303	26,792,872 22,480,800	31,047,770 26,657,888	1 1
New Jersey.....	1905 1900	20 53	135,481 242,284	5 14	1,170 4,850	43 74	21,075 36,852	10,909 9,219	317,752 488,105	395,490 610,000	26 24
Pennsylvania.....	1905 1900	645 740	3,049,116 3,033,128	311 127	88,506 45,506	1,218 970	550,310 445,708	237,544 110,105	9,650,310 8,711,035	11,681,115 10,290,000	6 5
Not distributed by states ¹	1905	9	428,642	14	13,032	153	68,032	34,193	808,070	950,242	.....
South Atlantic division.....	1905 1900	81 124	282,290 353,000	9 24	4,466 9,832	125 161	47,087 51,580	24,213 17,098	612,003 802,537	791,620 1,025,070	..........
Delaware.....	1905 1900	11 23	63,147 85,155	4 5	2,160 2,120	25 34	12,038 13,093	9,447 4,577	159,846 184,106	197,422 252,892	28 26
Maryland.....	1905 1900	65 84	175,028 234,058	5 18	2,806 7,312	80 113	20,035 33,008	11,380 11,151	309,207 557,047	518,760 693,705	25 21
Virginia.....	1905 1900	4 10	10,120 16,145	..... .....	..... .....	3 8	1,236 2,158	1,411 630	16,180 30,061	20,209 51,042	37 34
West Virginia ¹	1900	4	5,835	.....	.....	2	480	80	10,238	12,284	40
Georgia.....	1905 1900	6 4	26,800 13,497	..... 1	..... 400	14 4	3,004 1,860	1,245 800	26,817 10,515	38,878 14,100	35 38
Not distributed by states ¹	1905	5	6,765	.....	.....	3	1,414	730	9,803	16,360	.....
North Central division.....	1905 1900	5,425 5,427	26,540,900 20,491,038	2,375 1,879	773,967 497,345	8,895 7,109	4,880,403 3,476,943	2,501,500 814,514	82,376,785 60,900,886	96,870,258 73,043,248	..........
Ohio.....	1905 1900	431 470	1,428,224 1,041,093	61 89	18,077 19,088	488 380	201,947 189,804	73,123 35,214	3,720,197 3,054,764	4,603,222 3,808,000	10 9
Indiana.....	1905 1900	87 112	361,052 287,900	65 23	10,018 6,642	187 118	97,010 50,761	149,322 15,724	1,011,209 711,050	1,200,067 929,858	17 19
Illinois.....	1905 1900	405 527	5,322,352 4,465,752	205 230	154,210 136,403	1,735 1,483	828,577 666,688	514,737 177,417	10,708,098 10,100,420	13,270,533 12,870,200	4 4
Michigan.....	1905 1900	371 280	1,888,385 1,250,897	107 92	64,658 25,300	875 603	432,302 222,245	152,557 37,001	7,027,263 3,274,244	8,208,706 3,918,065	7 8
Wisconsin.....	1905 1900	2,360 2,018	5,897,418 4,017,940	323 414	68,926 99,076	2,208 1,780	1,328,076 893,490	447,417 157,123	26,406,185 10,623,850	29,004,701 20,129,147	2 2
Minnesota.....	1905 1900	771 896	3,305,120 2,204,950	236 341	62,926 59,284	1,041 740	633,532 308,224	288,040 102,066	11,136,505 7,188,711	12,871,129 8,479,806	5 6
Iowa.....	1905 1900	655 907	2,919,692 3,459,017	802 413	136,050 81,425	1,160 1,133	687,175 588,053	360,826 153,900	12,805,030 13,561,550	15,028,326 16,840,077	3 3
Missouri.....	1905 1900	54 70	545,039 109,706	51 24	32,836 4,964	148 74	68,846 31,138	96,711 5,089	1,033,031 320,158	1,313,058 431,636	16 25
North Dakota.....	1905 1900	60 21	202,478 51,515	25 5	1,575 1,250	55 13	38,246 7,725	10,744 1,231	478,274 122,128	502,481 122,128	24 29
South Dakota.....	1905 1900	97 138	484,130 400,932	120 95	20,293 11,780	102 148	125,360 77,401	57,253 18,523	1,833,350 1,005,237	2,182,053 1,109,493	14 16
Nebraska.....	1905 1900	40 93	1,861,190 522,185	113 66	102,053 40,509	253 333	136,087 146,522	185,084 38,228	2,671,078 1,854,228	3,326,110 2,253,893	12 12
Kansas.....	1905 1900	90 171	1,002,844 1,139,595	102 97	74,536 40,908	414 305	188,127 167,203	123,233 71,383	3,255,735 3,062,335	3,046,340 3,052,530	11 10
Not distributed by states ¹	1905	4	338,661	9	11,300	40	23,918	42,513	186,364	281,333	.....

¹The returns for the following establishments are not shown separately by states: 1905—Butter factories, Montana, 2; Rhode Island, 1; West Virginia, 1. Cheese factories, Connecticut, 1; Delaware, 1; Massachusetts, 2; South Dakota, 1; Virginia, 1; West Virginia, 2. Condensed milk factories, Colorado, 1; Indiana, 2; Iowa, 1; Maine, 1; New Hampshire, 1; New Jersey, 2; Oregon, 2; Utah, 1; Vermont, 1. 1900—Mississippi, 2; Vermont, 1; Wyoming, 2.

TABLE 4.—BUTTER, CHEESE, AND CONDENSED MILK—COMPARATIVE SUMMARY, BY STATES, TERRITORIES, AND GEOGRAPHIC DIVISIONS: 1905 AND 1900—Continued.

STATE OR TERRITORY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS AND WAGES.		Miscellaneous expenses.	Cost of materials used.	Value of products.	Rank.
				Number.	Salaries.	Average number.	Wages.				
South Central division.....	1905	22	\$88,930	7	\$5,056	33	\$17,740	\$7,213	\$199,984	\$279,325	.....
	1900	50	149,420	12	5,586	67	22,800	4,756	203,068	292,454	.....
Kentucky.....	1905	3	19,250	3	2,650	12	5,290	3,016	47,852	83,531	33
	1900	9	18,640	.....	.....	17	5,206	1,261	55,447	77,035	32
Tennessee.....	1905	3	8,300	.....	.....	1	520	178	9,527	11,498	38
	1900	12	36,175	6	2,340	20	4,193	1,113	49,846	69,722	33
Alabama ²	1900	4	13,670	.....	.....	4	1,277	175	8,034	12,969	39
Arkansas.....	1905	3	11,210	1	1,000	4	2,240	553	27,879	33,081	36
	1900	8	26,503	3	1,446	5	1,734	374	24,538	32,717	36
Oklahoma.....	1905	3	15,700	1	208	11	6,080	1,631	65,741	88,630	32
	1900	5	12,762	.....	.....	3	1,520	185	13,749	18,994	37
Texas.....	1905	10	34,470	2	1,198	5	3,610	1,835	48,985	62,585	34
	1900	12	41,670	3	1,890	18	8,870	1,648	51,454	81,017	31
Western division.....	1905	572	5,085,777	319	227,759	1,503	930,961	483,793	13,114,707	16,058,763	.....
	1900	434	2,362,633	248	122,646	891	439,069	127,037	5,782,842	7,165,806	.....
Montana ⁴	1900	3	6,823	.....	.....	2	1,101	199	6,022	8,418	41
Idaho.....	1905	16	43,565	13	1,712	13	9,880	6,887	135,606	171,844	30
	1900	19	74,663	8	3,395	14	7,076	1,411	85,140	116,056	30
Wyoming ²	1905	5	37,983	3	2,520	11	7,034	1,715	94,944	114,354	31
Colorado.....	1905	20	593,227	28	31,156	97	58,530	56,156	1,081,101	1,290,144	18
	1900	38	203,947	18	11,415	80	40,323	13,912	471,003	618,281	23
Arizona.....	1905	5	179,721	7	7,460	30	21,892	12,226	189,644	267,495	27
	1900	7	73,480	14	5,686	15	9,410	6,099	121,592	148,458	27
Utah.....	1905	49	406,480	23	15,770	98	55,145	46,056	789,377	963,811	20
	1900	57	269,247	54	15,976	159	63,135	13,788	550,096	713,889	20
Nevada.....	1905	4	57,064	1	240	10	9,030	2,433	161,120	196,651	29
	1900	4	49,766	9	2,570	11	6,428	1,099	127,044	148,301	28
Washington.....	1905	88	870,718	68	60,752	374	219,011	89,007	2,391,877	2,992,576	13
	1900	60	304,178	35	27,159	146	80,935	16,616	932,100	1,190,239	17
Oregon.....	1905	98	429,031	36	16,545	130	80,876	38,978	1,361,088	1,629,343	15
	1900	68	223,409	20	8,981	62	27,302	11,852	508,793	639,222	22
California.....	1905	281	2,107,308	125	78,264	603	414,041	194,024	6,460,186	7,820,937	8
	1900	178	1,157,090	90	47,464	402	203,359	62,161	2,980,962	3,582,942	11
Not distributed by states ¹	1905	6	360,680	15	13,340	137	55,522	36,311	449,674	611,608	.....
Not distributed by states or divisions ¹ ..	1900	5	99,120	4	2,484	41	15,945	848	124,691	171,699	.....

¹ Exclusive of 2 establishments in Mississippi included in the total "not distributed by states or divisions."² No establishments reported in 1905.³ In 1900 exclusive of 2 establishments in Wyoming included in the total "not distributed by states or divisions."⁴ The returns for the following establishments are not shown separately by states: 1905—Butter factories, Montana, 2; Rhode Island, 1; West Virginia, 1. Cheese factories, Connecticut, 1; Delaware, 1; Massachusetts, 2; South Dakota, 1; Virginia, 1; West Virginia, 2. Condensed-milk factories, Colorado, 1; Indiana, 2; Iowa, 1; Maine, 1; New Hampshire, 1; New Jersey, 2; Oregon, 2; Utah, 1; Vermont, 1. 1900—Mississippi, 2; Vermont, 1; Wyoming, 2.

The tendency of farmers in districts containing large cities to sell their milk and cream direct to consumers instead of making it into butter and cheese is further emphasized by the increases and decreases shown for geographic divisions in Table 4. In the Western division, where the local demand for milk and cream is comparatively small, the increase in all items was proportionately great. The gain in the number of establishments was 31.8 per cent, in capital 115.3 per cent, and in value of products 124.1 per cent. There was a loss of less than one-tenth of 1 per cent in the number of establishments in the North Central division, but an increase of 29.6 per cent in the amount of capital and of 31.5 per cent in the value of products.

In the North Atlantic division there was also a decrease in the number of establishments and an increase in the amount of capital and value of products. These two divisions show the effect of the consolidation of the industry. The whole industry sustained a loss in both the South Atlantic and South Central divisions.

Of the 8,926 establishments reported for the United States 6,602, or 74 per cent, were located in six states; these are discussed at greater length below. Of the other states the following are notable for the large gains in the value of products: Colorado, 108.7 per cent; Michigan, 109.5 per cent; California, 118.3 per cent; Washington, 151.4 per cent; Oregon, 154.9 per cent; Missouri, 204.2 per cent; North Dakota,

360.6 per cent. The following states show a decrease in the value of products: Delaware, 21.9 per cent; Texas, 22.8 per cent; Maryland, 25.2 per cent; Connecticut, 25.5 per cent; Massachusetts, 26.8 per cent; Maine, 28.9 per cent; New Jersey, 35.2 per cent; New Hampshire, 41.1 per cent; Virginia, 61.1 per cent; Tennessee, 83.5 per cent. It will be seen that, with few exceptions, those states showing losses are located in a section of the country in which many large cities and towns afford excellent markets for the sale of milk and cream.

The value of the products for the six leading states—New York, Wisconsin, Iowa, Illinois, Minnesota, and Pennsylvania—was \$113,799,670, or 67.7 per cent of the total value of the product for the United States. New York ranks first with products valued at \$31,047,776; Wisconsin second, \$29,994,791; Iowa, third, \$15,028,326; Illinois, fourth, \$13,276,533; Minnesota, fifth, \$12,871,129; Pennsylvania, sixth, \$11,581,115. The first four states have the same rank as in 1900, while Minnesota and Pennsylvania have changed places.

All of the six leading states except Iowa show gains in the principal items of Table 4. In New York the number of establishments decreased from 1,908 to 1,766, a loss of 142. The amount of capital increased

\$1,982,296, or 28 per cent; and the value of products, \$4,489,888, or 16.9 per cent. In Wisconsin the several items increased as follows: Number of establishments, 16.9 per cent; capital, 19.9 per cent; and value of products, 49.1 per cent. Iowa shows decreases in the several items ranging from one of 27.8 per cent in the number of establishments to one of 5.2 per cent in the value of products. In spite of this loss in value the state still retains her position as third in rank, leading Illinois, the next state, by more than \$1,750,000 in the value of products. Illinois lost 23.2 per cent in number of establishments, but gained 19.2 per cent in capital and 3.1 per cent in the value of products. Of these six states Minnesota shows the greatest development, the number of establishments having increased 29.4 per cent; the capital, 45.9 per cent; and the value of products, 51.8 per cent. In Pennsylvania the number of establishments decreased 13.9 per cent. The capital, however, increased 20.3 per cent, and the value of products, 12.5 per cent. None of the other states show products valued as high as \$10,000,000.

Table 5 shows the various products reported in the manufacture of butter, cheese, and condensed milk in the six leading states in 1905.

TABLE 5.—QUANTITY AND VALUE OF BUTTER, CHEESE, AND CONDENSED MILK PRODUCED IN THE SIX STATES OF GREATEST PRODUCTION: 1905.

	NEW YORK.		WISCONSIN.		IOWA.		ILLINOIS.		MINNESOTA.		PENNSYLVANIA.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Aggregate.....		\$31,047,776		\$29,994,791		\$15,028,326		\$13,276,533		\$12,871,129		\$11,581,115
Total for butter and its by-products.....		13,412,638		18,657,205		14,080,310		6,159,951		12,517,508		9,208,311
Butter, total.....	58,280,504	12,310,050	89,155,075	18,433,202	71,181,705	14,330,754	27,330,025	5,750,312	42,122,554	12,207,100	35,754,841	8,001,302
Packed solid.....	46,208,732	6,522,572	60,100,500	14,145,385	65,905,782	13,220,840	20,400,655	4,200,377	58,542,838	11,540,845	10,000,820	2,278,140
Prints or rolls.....	12,047,772	2,738,487	10,089,570	4,287,816	5,185,984	1,100,914	6,873,270	1,450,035	3,579,710	747,324	25,004,021	6,413,222
Crown sold.....	5,072,920	428,941	731,721	61,023	1,741,400	142,381	2,102,048	170,071	1,345,709	53,785	1,778,703	101,013
Skimmed milk disposed of.....	140,823,403	172,438	102,030,788	134,820	107,712,914	135,190	100,008,150	110,012	87,583,812	53,072	212,886,742	250,010
Cheese.....	6,736,500	310,053	94,128	4,320	0,000	150	0,520	1,223,013	00,520		2,455,001	123,023
Other products.....		184,247		23,228		80,835		00,027		32,004		65,403
Total for cheese and its by-products.....		10,875,457		10,534,347		283,074		420,187		314,463		1,024,574
Cheese, total.....	132,835,482	10,812,747	100,423,850	10,488,853	2,820,745	282,078	5,301,211	420,020	3,090,055	307,117	11,453,424	1,007,815
Standard factory.....	102,704,597	8,955,104	71,508,002	6,618,043	2,820,745	282,078	1,778,120	100,392	2,905,984	294,339	10,573,032	943,601
Skimmed.....	1,477,512	64,050	20,348	1,054			1,031,463	38,450			521,409	20,050
Other kinds.....	28,594,373	1,793,593	37,820,440	3,800,750			2,401,028	218,184	124,071	12,778	358,083	38,158
Whey sold.....	22,291,343	13,407	7,685,855	5,353	522,781	57	1,200,800	650			5,147,000	5,522
Whey otherwise disposed of.....	18,387,770	13,403	2,971,035	5,330	1,708,303	1,530			6,450,404	3,681	13,010,333	11,237
Other products.....		85,000		34,802				2,511		3,605		
Total for condensed milk and its by-products.....		6,750,681		708,230		(1)		0,674,734		4,425		1,234,417
Condensed milk, total.....	102,480,355	6,718,380	11,514,222	708,230	(1)	(1)	93,425,052	0,674,734	70,120	4,425	20,364,700	1,229,602
Sweetened.....	78,149,508	5,433,608	10,380,850	735,504			47,511,201	3,410,027	70,120	4,425	19,100,432	1,177,900
Unsweetened.....	24,330,847	1,284,712	1,124,366	62,735			45,913,701	3,257,807			1,204,268	51,033
Other products.....		41,301										4,815
Products not specified.....				5,000		55,333		12,601		34,703		23,813

¹ The value of condensed milk can not be shown without disclosing individual operations.

Practically the entire value of the products of the combined industries in Iowa and Minnesota—or in the former 97.7 per cent of the total and in the latter 97.3 per cent—as well as a large proportion in

Pennsylvania and Wisconsin was butter. In New York, cheese and condensed milk amounted to nearly 60 per cent of the total, and in Illinois condensed milk alone amounted to a little more than 50 per cent.

Table 6 shows the number of butter, cheese, and condensed milk factories in the various states and groups of states in 1905.

TABLE 6.—*Butter, cheese, and condensed milk—number of factories, by states, territories, and geographic divisions: 1905.*

STATE OR TERRITORY.	Total.	Butter.	Cheese.	Condensed milk.
United States.....	8,926	5,235	3,610	81
North Atlantic division.....	2,826	1,408	1,382	36
Maine.....	47	36	10	1
New Hampshire.....	35	31	3	1
Vermont.....	221	172	48	1
Massachusetts.....	38	36	2	.....
Rhode Island.....	1	1	.....	.....
Connecticut.....	42	41	1	.....
New York.....	1,766	543	1,198	25
New Jersey.....	31	29	.....	2
Pennsylvania.....	645	519	120	6
South Atlantic division.....	81	77	4	.....
Delaware.....	12	11	1	.....
Maryland.....	55	55	.....	.....
Virginia.....	5	4	1	.....
West Virginia.....	3	1	2	.....
Georgia.....	6	6	.....	.....
North Central division.....	5,425	3,283	2,111	31
Ohio.....	431	154	274	3
Indiana.....	89	63	24	2
Illinois.....	405	349	41	15
Michigan.....	371	203	162	6
Wisconsin.....	2,360	902	1,454	4
Minnesota.....	771	712	59	.....
Iowa.....	656	607	48	1
Missouri.....	54	37	17	.....
North Dakota.....	60	56	4	.....
South Dakota.....	98	97	1	.....
Nebraska.....	40	36	4	.....
Kansas.....	90	67	23	.....
South Central division.....	22	22	.....	.....
Kentucky.....	3	3	.....	.....
Tennessee.....	3	3	.....	.....
Arkansas.....	3	3	.....	.....
Oklahoma.....	3	3	.....	.....
Texas.....	10	10	.....	.....
Western division.....	572	445	113	14
Montana.....	2	2	.....	.....
Idaho.....	16	12	4	.....
Wyoming.....	5	5	.....	.....
Colorado.....	21	12	8	1
Arizona.....	5	5	.....	.....
Utah.....	50	39	10	1
Nevada.....	4	4	.....	.....
Washington.....	88	68	16	4
Oregon.....	100	67	31	2
California.....	281	231	44	6

Of the 8,926 establishments reported for the three industries, 5,235 were classed as butter, 3,610 as cheese, and 81 as condensed-milk factories. Of the butter factories, 5,077 manufactured butter only; 142, butter and cheese; 13, butter and condensed

milk; and 3, butter, cheese, and condensed milk. Of the cheese factories, 3,356 manufactured cheese only; 253, cheese and butter; 1, cheese, butter, and condensed milk. Of the condensed-milk factories, 55 reported condensed milk only; 21, condensed milk and butter; 1, condensed milk and cheese; 4, condensed milk, cheese, and butter.

In number of butter factories or creameries Wisconsin ranks first with 902; Minnesota had 712; Iowa, 607; New York, 543; Pennsylvania, 519; Illinois, 349; California, 231; and Michigan, 203. No other state reported as many as 200. Wisconsin, reporting 1,454 establishments, led in the number of cheese factories; New York was next, with 1,198; Ohio, 274; Michigan, 162; Pennsylvania, 120. No other state reported as many as 100. New York had the greatest number of condensed-milk factories, 25; Illinois, 15; California, Michigan, and Pennsylvania, 6 each; Washington and Wisconsin, 4 each; and Ohio, 3. None of the other states reported as many as 3. The North Central division, which is the leading division in value of products, also ranks first in the number of establishments. There were located in that division 3,283, or 62.7 per cent, of the butter factories; 2,111, or 58.5 per cent, of the cheese factories; and 31, or 38.3 per cent, of the condensed-milk factories. The North Atlantic, which is the second division of the states, both in number of establishments and in the value of products, reported 1,408, or 26.9 per cent, of the butter factories; 1,382, or 38.3 per cent, of the cheese factories; 36, or 44.4 per cent, of the condensed-milk factories. In the North Central division the butter factories predominate, there being about half as many again as cheese factories, while in the North Atlantic states the butter and the cheese factories are nearly equal in number. The Western division, a comparatively new territory for these industries, though showing smaller absolute gains, is notable for the large relative increase in the several items. There were reported for this division 445 butter, 113 cheese, and 14 condensed-milk factories.

Imports and exports.—Table 7 shows the quantity and value of imports and exports of butter and of cheese for the years 1885 to 1904, inclusive.

TABLE 7.—IMPORTS AND EXPORTS OF BUTTER AND CHEESE: 1885 TO 1904.¹

YEAR.	IMPORTS.				EXPORTS.			
	Butter.		Cheese.		Butter.		Cheese.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
1885.....	187,337	\$34,061	6,247,560	\$964,587	21,683,148	\$3,643,646	111,902,900	\$10,444,400
1886.....	178,712	28,421	6,309,124	855,670	18,953,000	2,058,457	91,877,235	7,002,145
1887.....	236,100	38,125	6,502,192	874,261	12,531,171	1,983,608	81,255,904	7,594,633
1888.....	143,215	26,429	8,750,185	1,214,036	10,455,051	1,884,008	88,008,458	8,736,304
1889.....	178,851	24,677	8,207,026	1,135,184	15,504,978	2,508,705	84,999,828	7,880,071
1890.....	75,521	13,670	9,263,573	1,295,500	20,748,042	4,187,480	95,376,053	8,591,042
1891.....	380,728	58,541	8,803,040	1,358,752	15,187,114	2,107,106	82,133,876	7,405,370
1892.....	114,137	16,549	8,305,288	1,238,190	15,047,246	2,445,878	82,100,221	7,077,057
1893.....	73,423	13,479	10,195,924	1,425,027	8,920,107	1,672,090	81,350,023	7,624,648
1894.....	144,340	23,356	8,742,851	1,247,108	11,812,002	2,077,608	73,852,134	7,180,331
1895.....	72,148	12,930	10,276,203	1,450,657	5,508,812	915,533	60,448,421	5,497,539
1896.....	62,067	8,533	10,728,397	1,401,338	10,373,913	2,037,203	36,777,201	3,091,914
1897.....	37,963	6,077	12,319,122	1,008,706	31,345,224	4,493,364	50,944,617	4,630,063
1898.....	31,984	5,474	10,012,188	1,343,173	25,600,025	3,804,765	53,107,280	4,550,324
1899.....	23,700	3,062	11,826,175	1,503,128	20,247,097	3,263,051	38,198,753	3,316,040
1900.....	40,791	9,709	13,455,000	1,701,613	18,266,371	3,143,500	48,419,353	4,043,600
1901.....	93,069	19,441	15,329,000	2,120,203	23,243,526	4,014,005	30,813,517	3,050,009
1902.....	453,078	80,725	17,067,714	2,551,336	16,002,169	2,885,000	27,203,184	2,745,697
1903.....	207,007	51,604	20,671,384	3,183,224	8,806,166	1,604,327	18,987,178	2,250,220
1904.....	164,457	34,704	22,707,103	3,284,811	10,717,824	1,768,184	23,335,172	2,452,230

¹"Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor.

From the beginning of the last century the exports of cheese from the United States increased constantly until 1881, when the maximum was reached. In that year the exports of cheese were valued at \$16,380,248 and amounted approximately to 149,000,000 pounds. Nearly all of the exports were taken by Great Britain, and as the trade increased many of the English houses established branches in this country. The product improved in quality until the cheese made in the United States stood at the head in the English market for imported cheese. Canada, too, furnished a market for a considerable portion of the butter and cheese products of this country.

The amount of butter imported into the United States is insignificant. On the other hand, there has been a steadily increasing demand for foreign varieties of cheese. The imports increased from 6,247,560 pounds in 1885 to 22,707,103 pounds in 1904. In 1904 imports of cheese were almost as great in quantity as the exports, while the value of the imports exceeded that of the exports by \$832,572.

MILK AND ITS BY-PRODUCTS.

Some general information about the manufacture of butter, cheese, and condensed milk and a statistical discussion based on Table 9 are given in the following paragraphs. A historical and descriptive discussion of the industries will be found in the Twelfth Census of the United States, Part III, Volume IX, pages 438 to 444.

Cream and milk.—Many plants engaged primarily in the sale of milk and cream were included in the number of establishments reported at the census of 1900. As plants of this class were omitted from the census of 1905, a large decrease was shown in the quantity of cream sold. In 1905 the quantity sold

amounted to 28,131,914 pounds, valued at \$2,364,407. This was a decrease of 33,632,638 pounds,¹ or 54.5 per cent. The business of selling milk and cream is growing rapidly, and many establishments located near large towns or cities find it more profitable to sell milk and cream to dealers or direct to the consumers than to sell to the cheese factories or creameries. The average value per pound for cream in 1905 was 8.4 cents.

The average price paid to patrons for milk used in making butter was 81 cents per 100 pounds. The prices ranged from 62 and 65 cents per 100 pounds in Nebraska and North Dakota, to \$1.01 and \$1.02 in New Hampshire and Connecticut. In Wisconsin the price paid was 80 cents; in New York, 83 cents; in Minnesota, 74 cents; in Pennsylvania, 94 cents; in California, 91 cents; in Illinois, 80 cents; in Vermont, 88 cents; in Michigan, 79 cents; in Kansas, 78 cents.

For making cheese an average of 78 cents per 100 pounds was paid. The price in New York was 76 cents; in Wisconsin, 78 cents; in Michigan, 85 cents; in Ohio, 73 cents; in Pennsylvania, 76 cents; in Vermont, 83 cents; in California, 96 cents; in Washington, 90 cents.

The factories making condensed milk paid an average price for milk of \$1.16 per 100 pounds in 1905, as compared with \$1.11 in 1900. Since the best quality of milk is necessary in manufacturing condensed milk, the average price of milk for these factories is higher than for butter or cheese factories. The price in the different states varied from 97 cents per 100 pounds in California to \$1.26 in Washington; other prices were \$1.06 in Michigan, \$1.10 in Pennsylvania and Wisconsin, and \$1.19 in Illinois, New York, and Ohio.

¹In 1900 the quantity sold was 7,720,569 gallons. Eight pounds of cream are taken as the equivalent of 1 gallon.

Twenty-five condensed-milk factories reported butter as a minor product. This suggests that some condensed milk is made from skimmed milk.

Butter.—In this report butter is classified as "packed solid" and "prints or rolls." From Table 9 it appears that 531,478,141 pounds were manufactured in 1905. Of this total, 364,432,996 pounds, or 68.6 per cent, was packed solid and 167,045,145 pounds, or 31.4 per cent, was in prints or rolls. This amount does not include 1,971,120 pounds, valued at \$448,729, reported as partial products of other industries.

The form in which butter is packed varies with the different markets. In the North Central division a small portion of the butter for local consumption was put up in prints or rolls, while the great bulk of the product was packed solid for shipment. In Iowa 92.7 per cent was of the packed solid form; in Minnesota, 94.2 per cent; in South Dakota, 98 per cent. In Pennsylvania, where the local demand was greater, 70.1 per cent was of the prints or rolls class. In the Pacific Coast states, where the local trade has become accustomed to prints or rolls, that form predominated. In California prints or rolls formed 88.5 per cent of the total; in Washington, 94 per cent; in Oregon, 83 per cent. Butter put up in the form of prints or rolls requires more labor and costs more to manufacture, but on account of its neat appearance commands better prices. The average price for all butter for the United States was 21.3 cents per pound; for the packed solid kind, 20.4 cents, and for prints or rolls, 23.2 cents.

Nine states reported the manufacture of more than 20,000,000 pounds of butter in 1905. Wisconsin, the leading state, reported 89,155,975 pounds; Iowa, 71,181,766 pounds; Minnesota, 62,122,554 pounds; New York, 58,256,504 pounds; Pennsylvania, 35,754,841 pounds; Illinois, 27,339,925 pounds; Vermont, 27,256,874 pounds; California, 26,837,386 pounds; and Michigan, 21,013,000 pounds. Iowa showed a decrease of 6,051,498 pounds, or 7.8 per cent; Pennsylvania, 1,382,320 pounds, or 3.7 per cent; Illinois, 6,715,387 pounds, or 19.7 per cent. Vermont showed an increase of 4,803,493 pounds, or 21.4 per cent; Wisconsin, 27,342,473 pounds, or 44.2 per cent; New York, 17,562,658 pounds, or 43.2 per cent; Minnesota, 20,948,085 pounds, or 50.9 per cent; California, 13,690,249 pounds, or 104.1 per cent; Michigan, 13,192,288 pounds, or 168.7 per cent.

Skimmed milk.—The total quantity of skimmed milk reported for 1905 was 1,161,414,457 pounds, valued at \$1,368,738. This amount represents all the skimmed milk sold or fed at the factory, that returned to patrons without consideration not being included. The average price per 100 pounds was 11.8 cents. A large part of this product was used in the manufacture of casein. Fresh skimmed milk makes a valuable food for calves and swine.

Casein.—Casein is a by-product of butter manufacture. Skimmed milk is coagulated with acid. After the whey has been drawn off, the acid is washed out of the curd, which is then dried. The product thus obtained may be used as a baker's supply and substitute for eggs, as a substitute for glue in sizing paper, as a binder for enamel paint, as a filler for wood, and for many other purposes.

It has recently been discovered that a horn-like substance could be made by mixing casein with formalin. This substance is called galalith, or milk-stone, and is used as a substitute for ivory, celluloid, marble, hard rubber, and even amber. This substance is smooth to the touch, retains an excellent color, and is proof against fire. In 1905 there were manufactured 11,581,874 pounds of casein, valued at \$554,099, or 4.8 cents per pound. Over one-half of the total for the United States, 6,736,506 pounds, were made in New York. Pennsylvania and Illinois were the only other states that reported as much as 1,000,000 pounds.

Cheese.—Prior to 1900 no attempt was made to classify the cheese manufactured. At the census in that year cheese was reported under two classes—"standard factory" and "other kinds." In 1905 there was added another class—"skimmed cheese"—which is shown in the detailed tables for the first time. At the time cheese factories began to operate the old English cheddar type was the form best known to the public. The manufacturers followed this style in a general way, only varying in such minor details as to size and color. While all the factories did not make the same size, there was evolved a general type known as the "American standard factory cheese." For census purposes this kind embraces all types that in a general way resemble the cheddar, such as the full cream, flats, young Americas, and truckle. Under "other kinds" has been classed all cheese that differs in the mode of manufacture from the cheddar type. "Skimmed cheese" includes all cheese made wholly from skimmed milk.

From Table 9 it appears that the cheese manufactured amounted to 317,144,872 pounds. Of this amount, 239,652,634 pounds, or 75.6 per cent, was of the standard factory; 74,032,656 pounds, or 23.3 per cent, of the "other kinds;" and 3,459,582 pounds, or 1.1 per cent, of the skimmed variety. The average price per pound for all kinds was 9 cents; for standard factory, 9.2 cents; for "other kinds," 8.7 cents; and for skimmed, 4.3 cents.

The distribution of the quantity of cheese indicates a pronounced tendency toward the concentration of this industry into a few states. New York, Wisconsin, Ohio, Michigan, and Pennsylvania reported 287,880,391 pounds, or 90.8 per cent of the total. In 1900 the same states reported 88.4 per cent of the total quantity of cheese produced. New York was the leading state

in the manufacture of cheese, having made 132,836,482 pounds; Wisconsin was second, with 109,423,856 pounds; Ohio, 17,351,773 pounds; Michigan, 16,814,856 pounds; Pennsylvania, 11,453,424 pounds. Other states reporting 1,000,000 pounds or more in 1905 were Vermont, Illinois, California, Minnesota, Iowa, Oregon, and Kansas.

In New York 77.4 per cent of the cheese was of the standard factory variety, which also exceeds "other kinds" in Ohio, Michigan, and Pennsylvania. In Wisconsin the total quantity of cheese was divided as follows: Standard factory, 65.4 per cent; "other kinds" and skimmed cheese, 34.6 per cent. Illinois was the only state in which the quantity of standard factory was exceeded by "other kinds." The cheese product of this state was divided as follows: Standard factory, 1,778,120 pounds; "other kinds," 2,491,628 pounds; skimmed, 1,031,463 pounds.

"Other kinds" embraces several varieties of cheese made in imitation of the most popular kinds of foreign cheese. Limburger and the several varieties of Swiss cheese made up considerably over half of the cheese reported under this head. In Wisconsin all that was so reported was either Swiss or Limburger, the former predominating. Several varieties of French cheese, such as Neufchâtel, Brie, and Camembert, were made in considerable quantities in New York.

Whey.—The only by-product of the cheese factory is whey, which is used principally as a food for animals. From it is obtained sugar of milk, which is manufactured by four factories in this country. As these factories are located in different states, their operations can not be shown separately without disclosing the business of individual establishments. Formerly the only use of sugar of milk was medicinal, but now, because of its digestibility, it is extensively used as an important ingredient of many infant and invalid foods. The total quantity of whey reported for the year 1905 was 166,451,226 pounds, valued at \$111,907. Of this amount, 79,904,034 pounds were sold and 86,547,192 pounds were fed to animals or otherwise used.

Condensed milk.—The relative growth of the condensed-milk industry has been much greater than that of either the butter or the cheese industry. During the past twenty-five years the condensed milk produced has increased in value 1,202 per cent. In 1880 the total production of condensed milk was 13,033,267 pounds, valued at \$1,547,588. In 1890 the product had increased to 37,926,821 pounds, valued at \$3,586,927. In 1900 there were manufactured 186,921,787 pounds, valued at \$11,888,792; and in 1905, 308,485,182 pounds, valued at \$20,149,282. Prior to 1905 no separation of the varieties of condensed milk was made in the Census reports, but in 1905 two varieties were reported under the heads of "sweetened" and "unsweetened." Of the total, 198,355,189 pounds, or 64.3

per cent, were of the sweetened, and 110,129,993 pounds of the unsweetened kind.

Two states, New York and Illinois, with half of the establishments, produced 195,905,407 pounds, or 63.5 per cent, of the total product for all states. New York was the leading state in the quantity manufactured, with a product of 102,480,355 pounds, valued at \$6,718,380; Illinois was second with 93,425,052 pounds, valued at \$6,674,734; Michigan, third, with 27,681,608 pounds, valued at \$1,644,277; Pennsylvania, fourth, with 20,364,700 pounds, valued at \$1,229,602; Wisconsin, fifth, with 11,514,222 pounds, valued at \$798,239; Washington, sixth, with 13,841,906 pounds, valued at \$738,688; California, seventh, with 7,723,021 pounds, valued at \$476,733; and Ohio, eighth, with 1,947,218 pounds, valued at \$139,063. The greatest absolute gains were made in New York, Illinois, and Pennsylvania. The increase in the value of condensed milk in New York was \$1,917,157, or 39.9 per cent; in Illinois, \$2,371,137, or 55.1 per cent; in Pennsylvania, \$973,767, or 380.6 per cent. The greatest relative gain was made in Ohio, the product having increased from \$6,500 to \$139,063, a gain of 2,039.4 per cent. Pennsylvania was also among those states showing large relative gains. Wisconsin showed an increase of \$567,014, or 245.2 per cent; California, \$215,037, or 82.2 per cent; Michigan, \$381,460, or 30.2 per cent; Washington, \$581,688, or 370.5 per cent. The following states also reported condensed-milk factories: Indiana, New Jersey, and Oregon, two each; Colorado, Iowa, Maine, New Hampshire, Utah, and Vermont, one each. The statistics for these states can not be given separately without disclosing the business of individual establishments. The average price per pound for all condensed milk was 6.5 cents; for sweetened, 6.8 cents; and for the unsweetened, 6.1 cents.

The "by-products" or other products have increased in value during the five years from \$33,680 to \$146,388, an increase of \$112,708, or 334.6 per cent.

Average product of factories.—The average product of butter factories in 1905 was 100,334 pounds, while the average product of cheese factories was only 85,245 pounds. Butter factories, as a rule, operate throughout the year, while the cheese factories operate only during the spring and summer months. The states having the highest averages for butter product were: Nebraska, 445,430 pounds; Colorado, 421,167 pounds; Kansas, 246,092 pounds. In the leading butter states, however, the averages per butter factory were much lower. Iowa, the second state in quantity of butter produced, had an average of 117,179 pounds. Wisconsin, the leading state, showed a smaller average, 98,243 pounds. In Minnesota the average was 87,250 pounds; in New York, 100,098 pounds. Pennsylvania shows the lowest average of any of the leading states, it being only 68,471 pounds. Of the leading states in

the production of cheese, New York showed the highest average per cheese factory, 107,760 pounds. Wisconsin, with 256 more establishments than New York, had a much lower average, 74,593 pounds. The average in Michigan was 103,795 pounds, and in Ohio, 61,613 pounds.

TABLE 8.—Average number of wage-earners employed during each month in each industry, with the greatest and least number employed at any one time: 1905.

MONTH.	Average number employed in butter factories.	Average number employed in cheese factories.	Average number employed in condensed-milk factories.
January.....	8,122	900	3,067
February.....	8,156	1,051	3,084
March.....	8,492	1,309	3,291
April.....	9,437	2,358	3,463
May.....	10,337	3,705	3,583
June.....	10,857	4,013	3,794
July.....	10,997	4,059	3,712
August.....	10,819	3,970	3,564
September.....	10,311	3,641	3,390
October.....	9,597	3,386	3,298
November.....	8,850	2,227	3,179
December.....	8,385	1,205	3,075
Greatest number.....	11,604	4,228	4,178
Least number.....	9,278	3,586	2,793

The condensed-milk factories averaged for all states 3,743,758 pounds. The highest averages were in Illinois and Michigan. The former had an average of 6,077,734 pounds and the latter an average of 4,572,832 pounds. In New York, which is the leading state in this industry, the factories are smaller, the average for that state being 4,056,030 pounds. California and Ohio showed the lowest averages, 1,270,504 pounds and 649,073 pounds, respectively.

Table 8 gives the average number of wage-earners employed for each month in each of the combined industries and the greatest and least number employed at any one time.

Both butter and condensed-milk factories vary but little in the number of wage-earners employed. In the former the least number in any month is 73.9 per cent of the greatest, and in the latter 82.6 per cent. In the cheese factories, however, the number employed in January is only 22.2 per cent of the number in July. That the least number in every case is employed in January and the greatest in June or July is due to the conditions which govern the milk supply.

TABLE 9.—BUTTER, CHEESE, AND CONDENSED MILK—

		United States.	Arizona.	Arkansas.	California.	Colorado.	Connecti- cut.	Delaware.
1	Number of establishments	8,926	5	3	281	20	41	11
2	Capital:							
3	Total	\$47,255,556	\$179,721	\$11,210	\$2,107,308	\$593,227	\$159,447	\$63,147
4	Land	\$2,557,065	\$29,100	\$850	\$172,720	\$50,030	\$11,300	\$2,200
5	Buildings	\$14,964,816	\$35,073	\$3,000	\$378,157	\$91,271	\$61,603	\$11,600
6	Machinery, tools, and implements	\$17,123,127	\$89,792	\$5,300	\$769,443	\$146,265	\$35,171	\$33,225
7	Cash and sundries	\$12,610,548	\$34,756	\$2,000	\$786,977	\$295,761	\$51,373	\$16,122
8	Proprietors and firm members	6,801	2	3	209	16	17	14
9	Salaried officials, clerks, etc.:							
10	Total number	3,507	7	1	125	28	28	4
11	Total salaries	\$1,376,097	\$7,460	\$1,000	\$78,264	\$31,156	\$15,289	\$2,160
12	Officers of corporations—							
13	Number	600	3	—	27	3	2	—
14	Salaries	\$338,235	\$3,180	—	\$16,712	\$9,000	\$2,120	—
15	General superintendents, managers, clerks, etc.—							
16	Total number	2,907	4	1	98	25	26	4
17	Total salaries	\$1,037,862	\$4,280	\$1,000	\$61,552	\$22,156	\$13,169	\$2,160
18	Men—							
19	Number	2,633	4	1	76	23	25	3
20	Salaries	\$923,851	\$4,280	\$1,000	\$51,762	\$21,320	\$13,145	\$1,740
21	Women—							
22	Number	274	—	—	22	2	1	1
23	Salaries	\$114,011	—	—	\$9,790	\$836	\$24	\$420
24	Wage-earners, including pieceworkers, and total wages:							
25	Greatest number employed at any one time during the year	20,010	48	4	750	122	90	30
26	Least number employed at any one time during the year	15,657	28	4	575	76	95	25
27	Average number	15,557	30	4	603	97	95	25
28	Total wages	\$8,412,937	\$21,892	\$2,240	\$414,041	\$58,530	\$57,155	\$12,088
29	Men 16 years and over—							
30	Average number	14,036	30	4	566	78	95	25
31	Wages	\$7,970,247	\$21,892	\$2,240	\$400,540	\$52,808	\$57,155	\$12,088
32	Women 16 years and over—							
33	Average number	1,405	—	—	36	19	—	—
34	Wages	\$421,933	—	—	\$13,357	\$5,722	—	—
35	Children under 16 years—							
36	Average number	116	—	—	—	—	—	—
37	Wages	\$20,757	—	—	\$144	—	—	—
38	Average number of wage-earners, including pieceworkers, employed during each month:							
39	Men 16 years and over—							
40	January	10,780	24	4	494	71	94	25
41	February	10,988	24	4	492	71	94	24
42	March	11,080	27	4	500	71	93	26
43	April	13,737	43	4	600	77	94	25
44	May	15,960	32	4	613	86	95	25
45	June	16,847	33	4	619	95	97	25
46	July	16,975	34	4	609	92	97	25
47	August	16,657	34	4	601	90	97	25
48	September	15,761	32	4	586	80	96	25
49	October	14,805	27	4	552	70	95	25
50	November	12,867	25	4	531	67	94	25
51	December	11,375	25	4	535	66	94	25
52	Women 16 years and over—							
53	January	1,239	—	—	28	14	—	—
54	February	1,231	—	—	26	15	—	—
55	March	1,324	—	—	34	15	—	—
56	April	1,432	—	—	54	19	—	—
57	May	1,538	—	—	57	19	—	—
58	June	1,652	—	—	58	25	—	—
59	July	1,605	—	—	34	27	—	—
60	August	1,519	—	—	31	25	—	—
61	September	1,453	—	—	30	21	—	—
62	October	1,362	—	—	26	19	—	—
63	November	1,296	—	—	24	14	—	—
64	December	1,209	—	—	30	15	—	—
65	Children under 16 years—							
66	January	70	—	—	1	—	—	—
67	February	72	—	—	1	—	—	—
68	March	88	—	—	1	—	—	—
69	April	89	—	—	1	—	—	—
70	May	127	—	—	1	—	—	—
71	June	165	—	—	3	—	—	—
72	July	185	—	—	2	—	—	—
73	August	177	—	—	2	—	—	—
74	September	128	—	—	1	—	—	—
75	October	114	—	—	—	—	—	—
76	November	93	—	—	—	—	—	—
77	December	81	—	—	—	—	—	—
78	Miscellaneous expenses:							
79	Total	\$4,074,268	\$12,226	\$553	\$194,024	\$56,156	\$24,301	\$9,447
80	Rent of works	\$227,988	\$60	—	\$34,327	\$5,706	\$350	\$956
81	Taxes	\$235,435	\$644	\$57	\$11,636	\$1,015	\$792	\$187
82	Rent of offices, interest, insurance, and all other sundry expenses not hitherto included	\$3,571,821	\$11,222	\$496	\$147,472	\$49,435	\$23,249	\$8,304
83	Contract work	\$39,024	—	—	\$589	—	—	—
84	Materials used:							
85	Aggregate cost	\$142,820,277	\$189,644	\$27,879	\$6,460,186	\$1,081,101	\$670,321	\$169,846
86	In making butter—							
87	Total cost	\$99,144,307	\$157,888	\$27,262	\$5,671,307	\$966,922	\$660,200	\$156,463
88	Milk bought or received from patrons—							
89	Pounds	8,393,098,823	17,083,390	2,574,439	428,060,394	17,587,554	3,405,826	17,633,187
90	Cost	\$67,742,351	\$132,784	\$25,694	\$3,920,483	\$148,966	\$34,761	\$154,338
91	Gathered cream—							
92	Pounds	588,186,471	332,376	7,461	29,504,300	15,555,407	12,477,322	—
93	Cost	\$28,371,040	\$22,069	\$278	\$1,662,817	\$780,579	\$617,164	—
94	Tubs, boxes, color, salt, etc	\$3,030,916	\$3,035	\$1,290	\$88,007	\$37,377	\$8,365	\$2,125
95	In making cheese—							
96	Total cost	\$24,684,891	\$13,422	—	\$344,307	\$78,952	—	—
97	Milk bought or received from patrons—							
98	Pounds	3,026,755,225	1,637,060	—	34,521,455	8,706,277	—	—
99	Cost	\$23,516,725	\$12,882	—	\$332,909	\$74,163	—	—
100	Skimmed milk bought or received from patrons—							
101	Pounds	36,071,335	—	—	—	—	—	—
102	Cost	\$59,398	—	—	—	—	—	—
103	Boxes, salt, etc	\$1,108,768	\$540	—	\$11,398	\$4,789	—	—

BUTTER, CHEESE, AND CONDENSED MILK.

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DETAILED SUMMARY, BY STATES AND TERRITORIES: 1905.

Georgia.	Idaho.	Illinois.	Indiana.	Iowa.	Kansas.	Kentucky.	Maine.	Maryland.	Massachusetts.	Michigan.	Minnesota.	Missouri.	
6	16	405	87	655	90	3	40	55	30	371	771	54	1
\$26,300	\$43,565	\$5,322,352	\$361,952	\$2,919,092	\$1,092,544	\$19,250	\$385,365	\$175,928	\$210,557	\$1,888,385	\$3,305,120	\$545,030	2
\$7,400	\$3,010	\$217,421	\$20,005	\$169,472	\$140,045	\$250	\$22,378	\$6,355	\$12,025	\$82,075	\$167,142	\$60,219	3
\$7,600	\$15,500	\$1,573,596	\$91,805	\$1,015,381	\$417,842	\$1,500	\$110,981	\$38,958	\$85,101	\$508,777	\$1,191,338	\$100,462	4
\$10,500	\$17,275	\$1,743,344	\$131,694	\$1,128,110	\$719,630	\$4,400	\$76,130	\$85,837	\$38,804	\$738,856	\$1,451,760	\$217,070	5
\$800	\$7,780	\$1,767,901	\$97,848	\$900,129	\$709,027	\$13,100	\$175,870	\$44,778	\$73,727	\$558,677	\$494,880	\$140,888	6
4	9	272	72	361	88	6	21	71	12	259	286	42	7
	13	295	65	892	102	3	24	5	47	167	236	51	8
	\$1,712	\$154,210	\$10,018	\$136,959	\$74,536	\$2,650	\$8,923	\$2,306	\$9,330	\$64,658	\$62,926	\$32,836	9
	1	28	12	110	20		3	1		75	6	5	10
	\$312	\$27,578	\$2,055	\$20,737	\$20,375		\$3,354	\$80		\$16,822	\$11,875	\$6,408	11
	12	267	53	692	82	3	21	4	47	92	230	40	12
	\$1,400	\$126,632	\$10,363	\$107,222	\$54,161	\$2,550	\$5,569	\$2,246	\$9,330	\$47,836	\$51,051	\$26,428	13
	12	241	40	605	50	3	15	4	44	82	220	35	14
	\$1,400	\$114,400	\$15,303	\$95,490	\$43,894	\$2,050	\$3,278	\$2,246	\$8,624	\$45,487	\$47,183	\$20,644	15
		26	4	27	26		6		3	10	10	11	16
		\$12,172	\$1,000	\$11,732	\$10,267		\$2,291		\$706	\$2,340	\$3,868	\$5,784	17
17	17	2,035	312	1,444	502	12	101	92	74	1,125	1,180	248	18
10	10	1,550	187	1,077	392	12	87	82	65	805	1,070	135	19
14	13	1,735	187	1,100	414	12	78	80	64	875	1,041	148	20
\$3,904	\$9,880	\$828,577	\$97,010	\$687,175	\$188,127	\$5,200	\$47,393	\$20,035	\$40,803	\$432,302	\$633,632	\$68,940	21
14	13	1,227	186	1,131	395	12	76	76	63	750	1,038	130	22
\$3,904	\$9,880	\$670,005	\$97,400	\$678,384	\$170,740	\$5,200	\$47,007	\$28,485	\$40,170	\$308,630	\$632,962	\$60,285	23
		465	1	24	30		2	2	1	122	2	10	24
		\$143,327	\$210	\$8,171	\$15,500		\$380	\$330	\$624	\$33,312	\$480	\$2,436	25
		43		5	10			2		3	1	2	26
		\$8,645		\$620	\$1,881			\$220		\$360	\$90	\$125	27
12	12	1,117	168	885	325	12	61	68	59	698	936	110	28
12	12	1,151	171	984	330	12	61	60	59	600	934	118	29
13	12	1,173	172	1,003	341	12	61	71	58	661	946	121	30
17	12	1,247	179	1,089	350	12	71	73	64	748	1,032	128	31
17	14	1,314	194	1,181	404	12	86	78	60	850	1,104	144	32
17	14	1,342	203	1,318	400	12	92	70	68	890	1,143	155	33
17	14	1,325	204	1,326	412	12	97	84	67	880	1,148	140	34
16	14	1,295	204	1,320	410	12	94	85	69	848	1,143	149	35
16	14	1,272	190	1,206	384	12	89	84	67	822	1,099	147	36
11	14	1,239	180	1,118	340	12	73	81	59	765	1,042	138	37
10	12	1,147	177	1,036	332	12	64	61	61	684	982	134	38
10	12	1,102	175	1,000	325	12	63	70	50	645	947	130	39
		472	1	12	33			2	1	92	1	7	40
		465	1	12	33			2	1	100	1	5	41
		466	1	13	37			2	1	120	1	6	42
		480	1	13	40			2	1	131	1	8	43
		480	1	42	42			2	1	149	3	11	44
		480	1	43	44		4	2	1	147	3	15	45
		469	1	45	51		2	1	1	132	3	15	46
		460	1	20	47		4	2	1	120	3	12	47
		463	1	28	42		4	2	1	124	2	11	48
		450	1	10	36		4	2	1	112	2	11	49
		457	1	18	34		4	2	1	111	2	10	50
		492	1	14	20			2	1	108	2	9	51
		28		4	6			2		3		2	52
		28		5	7			2		3		2	53
		30		5	8			2		3		2	54
		35		5	8			2		3		2	55
		44		5	19			2		4		2	56
		65		5	12			2		4		2	57
		69		5	14			2		4		2	58
		92		6	12			2		4		2	59
		44		6	10			2		2		2	60
		40		6	10			2		2		2	61
		37		5	10			2		2		2	62
		34		4	6			2		2		2	63
\$1,245	\$9,887	\$514,737	\$140,322	\$300,826	\$123,233	\$3,016	\$40,497	\$11,380	\$11,830	\$152,557	\$288,040	\$90,711	64
	\$500	\$11,191	\$3,072	\$3,072	\$2,235	\$1,050	\$542	\$1,644	\$305	\$4,815	\$13,074	\$4,719	65
\$200	\$430	\$21,194	\$8,878	\$17,597	\$8,280	\$145	\$2,281	\$743	\$1,425	\$12,990	\$15,973	\$2,850	66
\$985	\$5,858	\$481,901	\$137,372	\$326,499	\$112,718	\$1,821	\$37,674	\$8,693	\$10,109	\$134,752	\$257,477	\$89,142	67
		\$451		\$3,408							\$1,516		68
\$26,817	\$135,606	\$10,708,908	\$1,011,200	\$12,895,030	\$3,255,735	\$47,852	\$1,045,350	\$300,207	\$778,851	\$7,027,203	\$11,130,505	\$1,033,031	69
\$25,260	\$122,426	\$5,112,021	\$894,163	\$12,355,807	\$2,750,310	\$47,180	\$974,405	\$381,950	\$700,392	\$3,040,055	\$10,577,890	\$905,698	70
2,804,800	6,499,617	553,402,569	99,023,222	990,461,152	80,014,112	547,500	6,005,212	41,170,568	12,322,850	430,169,785	1,041,437,057	20,068,482	71
\$24,800	\$50,020	\$4,414,001	\$790,040	\$9,093,553	\$978,717	\$5,475	\$55,625	\$343,983	\$108,407	\$3,483,053	\$7,067,179	\$159,481	72
	1,476,893	11,062,470	1,225,007	110,850,350	30,833,070	930,520	18,880,388	557,527	12,342,544	7,714,087	57,562,240	16,292,834	73
	\$97,537	\$744,588	\$97,072	\$4,084,024	\$1,942,420	\$41,400	\$878,041	\$30,372	\$944,023	\$335,054	\$2,503,420	\$769,264	74
\$460	\$4,200	\$154,272	\$27,161	\$408,230	\$135,182	\$305	\$40,200	\$7,595	\$10,992	\$130,048	\$357,282	\$36,053	75
	\$10,004	\$334,308	\$82,213	\$220,468	\$83,072		\$33,123			\$1,407,414	\$230,207	\$52,205	76
	1,320,442	37,558,880	9,000,152	28,474,242	11,385,334		3,562,500			105,825,871	30,709,390	7,114,000	77
	\$9,082	\$204,874	\$70,227	\$200,476	\$79,346		\$31,902			\$1,405,506	\$228,727	\$49,379	78
		14,500,000											79
		\$22,203											80
	\$712	\$17,141	\$2,980	\$11,012	\$3,726		\$1,131			\$61,008	\$10,540	\$2,017	81

TABLE 9.—BUTTER, CHEESE, AND CONDENSED MILK—

	United States.	Arizona.	Arkansas.	California.	Colorado.	Connecticut.	Delaware.
Materials used—Continued.							
Aggregate cost—Continued.							
In making condensed milk—							
82 Total cost.....	\$15,618,521	\$4,365	.....	\$323,058	.....	.....	.....
Milk—							
83 Pounds.....	727,450,502	215,000	.....	17,609,384	.....	.....	.....
84 Cost.....	\$8,470,669	\$2,365	.....	\$171,093	.....	.....	.....
Sugar—							
85 Pounds.....	67,810,031	.....	.....	812,926	.....	.....	.....
86 Cost.....	\$3,315,892	.....	.....	\$43,152	.....	.....	.....
Cans, labels, etc.							
87 Cost.....	\$3,831,960	\$2,000	.....	\$108,813	.....	.....	.....
88 Fuel.....	\$2,297,335	\$12,340	\$502	\$76,579	\$7,335	\$6,113	\$3,115
89 Rent of power and heat.....	\$49,090	.....	.....	\$10,633	\$6,922	.....	.....
90 Milk supplies.....	\$216,722	\$580	\$55	\$8,606	\$635	\$411	\$268
91 All other materials.....	\$373,176	\$1,049	.....	\$775	\$5,701	.....	.....
92 Freight.....	\$536,265	.....	.....	\$24,921	\$14,634	\$3,507	.....
Products:							
93 Aggregate value.....	\$168,182,789	\$267,495	\$33,081	\$7,820,937	\$1,290,144	\$514,703	\$197,422
Butter and its by-products—							
94 Total value.....	\$118,205,280	\$222,890	\$33,081	\$6,875,695	\$1,160,999	\$813,503	\$197,422
Butter—							
95 Pounds.....	531,478,141	799,433	127,309	26,837,386	5,054,006	2,903,277	644,823
96 Value.....	\$113,189,453	\$192,702	\$28,336	\$6,640,845	\$1,068,714	\$748,547	\$156,037
Packed solid—							
97 Pounds.....	364,432,996	2,500	109,309	3,070,637	402,841	272,974	27,000
98 Value.....	\$74,483,306	\$600	\$24,534	\$742,920	\$83,720	\$64,739	\$5,160
Prints or rolls—							
99 Pounds.....	167,045,145	796,933	18,000	23,766,749	4,651,165	2,630,303	617,823
100 Value.....	\$38,706,147	\$192,102	\$3,802	\$5,897,916	\$984,994	\$683,808	\$150,877
Cream, sold—							
101 Pounds.....	28,131,914	229,249	60,000	921,334	931,560	695,201	422,800
102 Value.....	\$2,364,497	\$23,359	\$4,500	\$132,277	\$71,350	\$56,526	\$32,196
Skimmed milk sold, fed, or returned to patrons—							
103 Pounds.....	1,161,414,457	.....	.....	77,886,727	4,073,000	1,801,530	12,010,018
104 Value.....	\$1,368,738	.....	.....	\$63,662	\$5,938	\$2,481	\$6,829
Casein dried from skimmed milk—							
105 Pounds.....	11,581,874	.....	.....	113,256	.....	.....	70,000
106 Value.....	\$554,099	.....	.....	\$4,572	.....	.....	\$2,300
107 All other butter factory products.....	\$728,583	\$6,829	\$245	\$34,339	\$14,997	\$5,949	\$60
Cheese and its by-products—							
108 Total value.....	\$28,938,282	\$17,125	.....	\$432,004	\$106,745	.....	.....
Cheese—							
109 Pounds.....	317,144,872	161,796	.....	3,601,051	871,673	.....	.....
110 Value.....	\$28,611,760	\$17,125	.....	\$425,231	\$102,524	.....	.....
Standard factory (cheddars or flats)—							
111 Pounds.....	239,652,634	161,796	.....	3,427,051	871,673	.....	.....
112 Value.....	\$22,024,853	\$17,125	.....	\$398,856	\$102,524	.....	.....
Skimmed cheese, any size or form—							
113 Pounds.....	3,459,582	.....	.....	.....	.....	.....	.....
114 Value.....	\$148,508	.....	.....	.....	.....	.....	.....
Other kinds—							
115 Pounds.....	74,082,656	.....	.....	174,000	.....	.....	.....
116 Value.....	\$6,438,339	.....	.....	\$28,375	.....	.....	.....
Whey sold—							
117 Pounds.....	79,904,034	.....	.....	837,175	500,000	.....	.....
118 Value.....	\$44,696	.....	.....	\$393	\$250	.....	.....
Whey otherwise used—							
119 Pounds.....	86,547,192	.....	.....	8,639,779	2,442,900	.....	.....
120 Value.....	\$67,211	.....	.....	\$4,337	\$1,491	.....	.....
121 All other cheese factory products.....	\$114,615	.....	.....	\$2,043	.....	.....	.....
Condensed milk and its by-products—							
122 Total value.....	\$20,295,670	\$8,100	.....	\$488,733	.....	.....	.....
Condensed milk—							
123 Pounds.....	308,485,182	162,000	.....	7,723,021	.....	.....	.....
124 Value.....	\$20,149,282	\$8,100	.....	\$476,733	.....	.....	.....
Sweetened—							
125 Pounds.....	198,355,189	.....	.....	551,320	.....	.....	.....
126 Value.....	\$13,478,376	.....	.....	\$38,106	.....	.....	.....
Unsweetened—							
127 Pounds.....	110,129,993	162,000	.....	7,171,701	.....	.....	.....
128 Value.....	\$6,679,906	\$8,100	.....	\$438,627	.....	.....	.....
129 All other condensed-milk factory products.....	\$146,388	.....	.....	\$12,000	.....	.....	.....
130 All other products not classified.....	\$843,537	\$19,380	.....	\$24,505	\$22,400	\$1,200	.....
Equipment:							
131 Cream separators, number.....	8,842	12	4	329	16	18	21
132 Branch factories, number.....	659	.....	.....	7	1	.....	1
133 Separating or skimming stations, number.....	1,620	4	.....	67	16	.....	9
Power:							
134 Number of establishments reporting.....	6,429	5	3	247	17	40	11
135 Total horsepower.....	94,626	263	42	3,038	526	299	165
Owned—							
Engines—							
Steam—							
136 Number.....	7,031	8	3	224	20	38	15
137 Horsepower.....	88,677	185	42	2,461	476	291	165
Gas or gasoline—							
138 Number.....	277	1	.....	27	.....	2	.....
139 Horsepower.....	1,800	3	.....	191	.....	8	.....
Water wheels—							
140 Number.....	79	.....	.....	5	.....	.....	.....
141 Horsepower.....	1,380	.....	.....	27	.....	.....	.....
Water motors—							
142 Number.....	8	.....	.....	3	.....	.....	.....
143 Horsepower.....	31	.....	.....	7	.....	.....	.....
Electric motors—							
144 Number.....	158	.....	.....	4	5	.....	.....
145 Horsepower.....	781	.....	.....	12	50	.....	.....
146 Other power, horsepower.....	246	75	.....	25	.....	.....	.....
Rented—							
Electric motors—							
147 Number.....	133	.....	.....	40	.....	.....	.....
148 Horsepower.....	1,597	.....	.....	304	.....	.....	.....
149 Other kind, horsepower.....	114	.....	.....	11	.....	.....	.....
150 Furnished to other establishments, horsepower.....	88	.....	.....	.....	12	.....	.....

Georgia.	Idaho.	Illinois.	Indiana.	Iowa.	Kansas.	Kentucky.	Maine.	Maryland.	Massachusetts.	Michigan.	Minnesota.	Missouri.	
		\$4,934,731	\$7,439							\$1,450,498	\$4,085	82	
		218,758,603	1,000,251							65,234,608	350,300	83	
		\$2,608,888	\$7,301							\$693,581	\$2,875	84	
		10,825,039	600							8,103,788	20,000	85	
		\$891,640	\$30							\$301,510	\$1,120	86	
		\$1,484,233	\$18							\$300,407	\$90	87	
\$1,477	\$2,084	\$258,258	\$22,751	\$222,042	\$58,782	\$535	\$10,737	\$7,003	\$0,610	\$104,144	\$244,349	\$8,480	88
\$80	\$200	\$1,360		\$2,171	\$5,011	\$87	\$570	\$51		\$1,885	\$2,712	\$4,692	89
	\$217	\$23,637	\$1,940	\$24,146	\$5,011	\$87	\$570	\$103	\$508	\$11,470	\$23,304	\$903	90
		\$1,468	\$450	\$24,207	\$255,947		\$2,724	\$1,308			\$5,283	\$500	91
	\$75	\$42,300	\$2,263	\$35,800	\$96,574	\$50	\$23,637	\$2,172	\$2,242	\$42,197	\$42,585	\$462	92
\$38,878	\$171,844	\$13,270,533	\$1,290,607	\$15,028,320	\$3,940,340	\$83,531	\$1,220,078	\$518,700	\$870,958	\$3,208,706	\$12,871,120	\$1,313,958	03
\$35,878	\$158,440	\$6,180,951	\$1,162,383	\$14,080,319	\$3,397,738	\$83,531	\$1,185,108	\$505,151	\$870,958	\$4,782,436	\$12,517,508	\$1,240,037	04
133,000	671,783	27,339,025	4,742,632	71,181,700	10,488,131	230,001	5,005,007	1,816,433	3,470,323	21,013,000	62,122,554	5,800,724	05
\$33,100	\$155,500	\$5,750,312	\$1,070,079	\$14,330,754	\$3,355,764	\$70,795	\$1,153,040	\$431,918	\$831,315	\$4,411,198	\$12,207,100	\$1,192,007	06
97,400	36,222	20,400,655	3,380,012	65,005,782	8,728,216	15,005	2,608,288	320,002	1,105,078	10,272,730	58,542,838	1,800,507	07
\$23,075	\$7,500	\$4,200,377	\$701,006	\$13,220,840	\$1,731,584	\$4,000	\$605,343	\$72,410	\$254,717	\$4,027,770	\$11,549,845	\$389,370	08
36,500	635,501	0,873,270	1,362,020	5,185,084	7,750,015	223,096	2,337,019	1,480,531	2,304,045	1,740,270	3,570,710	3,040,217	09
\$9,125	\$147,007	\$1,450,935	\$308,083	\$1,100,914	\$1,624,180	\$60,705	\$547,700	\$359,502	\$576,508	\$383,428	\$747,324	\$800,228	100
	14,004	2,192,048	479,153	1,741,400	168,392	60,555	120,084	680,005	408,716	3,130,000	1,345,760	308,551	101
	\$1,804	\$170,071	\$41,522	\$142,381	\$13,374	\$4,500	\$15,210	\$50,485	\$28,302	\$234,540	\$93,703	\$28,329	102
1,846,000		100,098,150	29,476,082	107,712,014	19,467,311	438,000	3,182,150	10,321,574	988,981	83,336,032	87,583,812	4,374,260	103
\$2,778		\$110,012	\$40,793	\$135,190	\$18,752	\$876	\$3,505	\$17,446	\$2,094	\$110,121	\$93,072	\$5,342	104
		1,223,013		0,000	10,102		158,152	83,712	140,000				105
		\$60,520		\$150	\$600		\$9,380	\$4,152	\$7,000				106
	\$1,070	\$60,027	\$0,080	\$80,835	\$9,242	\$7,300	\$4,000	\$1,155	\$8,247	\$17,570	\$32,004	\$13,759	107
	\$13,404	\$420,187	\$111,177	\$283,074	\$105,048		\$30,485			\$1,744,288	\$314,493	\$68,321	108
	132,420	5,801,211	978,003	2,820,745	1,120,863		361,850			10,814,856	3,090,055	743,447	109
	\$13,404	\$420,0											

MANUFACTURES.

TABLE 9.—BUTTER, CHEESE, AND CONDENSED MILK—

	Nebraska.	Nevada.	New Hampshire.	New Jersey.	New York.	North Dakota.	Ohio.
1 Number of establishments.....	40	4	34	29	1,766	60	431
2 Capital:							
3 Total.....	\$1,861,196	\$57,064	\$163,256	\$135,481	\$9,066,426	\$202,178	\$1,428,224
4 Land.....	\$98,598	\$1,370	\$8,900	\$7,120	\$446,046	\$8,362	\$110,120
5 Buildings.....	\$432,809	\$27,807	\$60,050	\$35,481	\$3,398,227	\$91,452	\$522,983
6 Machinery, tools, and implements.....	\$456,593	\$16,100	\$54,105	\$64,260	\$3,288,104	\$88,038	\$542,247
7 Cash and sundries.....	\$963,316	\$11,787	\$31,201	\$28,620	\$1,934,049	\$14,326	\$252,574
8 Proprietors and firm members.....	24		20	26	1,721	18	315
9 Salaried officials, clerks, etc.:							
10 Total number.....	113	1	20	5	215	25	61
11 Total salaries.....	\$102,053	\$240	\$6,188	\$1,170	\$192,400	\$1,575	\$18,677
12 Officers of corporations—							
13 Number.....	14		3		40		3
14 Salaries.....	\$30,300		\$620		\$42,106		\$400
15 General superintendents, managers, clerks, etc.—							
16 Total number.....	99	1	17	5	175	25	58
17 Total salaries.....	\$71,753	\$240	\$5,568	\$1,170	\$150,294	\$1,575	\$18,277
18 Men—							
19 Number.....	74	1	14	5	161	25	54
20 Salaries.....	\$58,051	\$240	\$4,458	\$1,170	\$142,574	\$1,575	\$16,932
21 Women—							
22 Number.....	25		3		14		4
23 Salaries.....	\$13,702		\$1,110		\$7,720		\$1,345
24 Wage-earners, including pieceworkers, and total wages:							
25 Greatest number employed at any one time during the year.....	367	10	81	50	3,983	81	720
26 Least number employed at any one time during the year.....	205	10	64	44	2,974	63	612
27 Average number.....	253	10	63	43	2,868	55	488
28 Total wages.....	\$136,687	\$9,030	\$36,452	\$21,075	\$1,485,072	\$38,246	\$291,947
29 Men 16 years and over—							
30 Average number.....	220	10	61	41	2,516	55	468
31 Wages.....	\$124,463	\$9,030	\$35,552	\$20,590	\$1,383,107	\$38,246	\$286,903
32 Women 16 years and over—							
33 Average number.....	33		2	1	346		14
34 Wages.....	\$12,224		\$900	\$360	\$101,488		\$4,190
35 Children under 16 years—							
36 Average number.....				1	6		6
37 Wages.....				\$125	\$477		\$554
38 Average number of wage-earners, including pieceworkers, employed during each month:							
39 Men 16 years and over—							
40 January.....	178	10	57	41	1,496	37	264
41 February.....	174	10	58	41	1,631	39	270
42 March.....	185	10	59	38	1,872	39	291
43 April.....	220	10	61	44	2,518	46	404
44 May.....	243	10	65	43	3,093	61	577
45 June.....	287	10	66	44	3,336	73	626
46 July.....	282	10	66	43	3,369	80	657
47 August.....	277	10	64	43	3,258	76	649
48 September.....	242	10	64	41	2,994	67	608
49 October.....	204	10	59	36	2,834	55	553
50 November.....	177	10	57	39	2,142	45	400
51 December.....	171	10	56	39	1,649	42	317
52 Women 16 years and over—							
53 January.....	23		2	1	320		3
54 February.....	23		2	1	309		3
55 March.....	23		2	1	338		3
56 April.....	24		2	1	362		4
57 May.....	28		2	1	377		7
58 June.....	51		2	1	402		19
59 July.....	57		2	1	397		23
60 August.....	53		2	1	385		23
61 September.....	40		2	1	345		25
62 October.....	31		2	1	329		21
63 November.....	21		2	1	307		19
64 December.....	22		2	1	281		18
65 Children under 16 years—							
66 January.....					5		
67 February.....					5		
68 March.....					5		
69 April.....					5		
70 May.....				2	7		2
71 June.....				2	7		13
72 July.....				2	7		17
73 August.....				2	7		15
74 September.....				2	7		9
75 October.....				2	8		6
76 November.....					7		5
77 December.....					5		5
78 Miscellaneous expenses:							
79 Total.....	\$185,084	\$2,433	\$21,978	\$10,009	\$576,240	\$10,744	\$73,123
80 Rent of works.....	\$5,652		\$463	\$1,124	\$30,139	\$1,263	\$9,695
81 Taxes.....	\$7,446	\$370	\$1,126	\$582	\$42,068	\$971	\$8,154
82 Rent of offices, insurance, interest, and all sundry expenses not hitherto included.	\$171,986	\$2,063	\$20,389	\$9,203	\$500,004	\$8,510	\$54,824
83 Contract work.....					\$4,029		\$450
84 Materials used:							
85 Aggregate cost.....	\$2,671,978	\$161,120	\$730,380	\$317,752	\$26,792,872	\$478,274	\$3,729,197
86 In making butter—							
87 Total cost.....	\$2,581,152	\$154,905	\$606,407	\$310,625	\$11,277,856	\$459,599	\$2,201,657
88 Milk bought or received from patrons—							
89 Pounds.....	156,377,090	15,768,403	45,983,092	31,059,303	1,272,356,745	35,936,537	224,963,996
90 Cost.....	\$971,433	\$140,572	\$465,443	\$302,922	\$10,590,004	\$233,986	\$1,816,730
91 Gathered cream—							
92 Pounds.....	32,312,868	231,900	4,298,756	4,950	6,176,069	4,795,099	6,582,108
93 Cost.....	\$1,497,411	\$12,186	\$206,566	\$190	\$292,200	\$202,805	\$337,790
94 Tubs, boxes, color, salt, etc.....	\$112,258	\$2,147	\$24,398	\$7,513	\$395,652	\$22,808	\$47,137
95 In making cheese—							
96 Total cost.....	\$13,741	\$3,057	\$20,101		\$9,504,802	\$3,832	\$1,350,605
97 Milk bought or received from patrons—							
98 Pounds.....	1,601,200	300,000	2,102,900		1,189,565,135	528,979	175,807,869
99 Cost.....	\$12,951	\$3,000	\$19,123		\$9,050,012	\$3,633	\$1,288,856
100 Skimmed milk bought or received from patrons—							
101 Pounds.....					6,213,777		4,717,950
102 Cost.....					\$9,261		\$6,824
103 Boxes, salt, etc.....	\$790	\$57	\$978		\$445,529	\$199	\$54,925

¹ Includes establishments distributed as follows: Colorado, 1; Connecticut, 1; Delaware, 1; Indiana, 2; Iowa, 1; Maine, 1; Massachusetts, 2; Montana, 2; New Hampshire, 1; New Jersey, 2; Oregon, 2; Rhode Island, 1; South Dakota, 1; Utah, 1; Vermont, 1; Virginia, 1; West Virginia, 3.

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Oklahoma.	Oregon.	Pennsylvania.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	Wisconsin.	Wyoming.	All other states. ¹	
3	98	645	97	3	10	49	220	4	88	2,360	5	24	1
\$15,700	\$420,031	\$3,649,116	\$484,139	\$8,300	\$34,470	\$406,480	\$1,053,369	\$10,120	\$870,718	\$5,897,418	\$37,083	\$1,134,778	2
\$800	\$24,720	\$209,340	\$18,938	\$250	\$5,070	\$11,850	\$42,100	\$1,800	\$29,088	\$312,905	\$800	\$26,815	3
\$2,000	\$70,553	\$1,070,788	\$158,808	\$2,000	\$7,150	\$77,705	\$341,890	\$3,400	\$103,886	\$2,544,976	\$5,400	\$249,000	4
\$8,650	\$176,608	\$1,305,535	\$213,285	\$3,550	\$16,780	\$125,778	\$353,781	\$3,900	\$316,741	\$2,157,465	\$12,531	\$306,549	5
\$4,250	\$157,150	\$1,003,453	\$93,108	\$2,300	\$5,470	\$191,147	\$315,592	\$1,020	\$420,103	\$882,072	\$10,452	\$401,514	6
4	91	623	32	2	12	38	106	6	60	1,858	3	15	7
1	36	311	126		2	23	133		68	323	3	38	8
\$208	\$16,545	\$88,566	\$29,203		\$1,198	\$15,770	\$20,951		\$60,752	\$68,926	\$2,520	\$37,672	9
	14	32	4			3	7		10	161		4	10
	\$6,949	\$28,549	\$5,970			\$4,800	\$5,355		\$25,830	\$31,108		\$6,000	11
1	22	270	122		2	20	126		52	150	3	34	12
\$208	\$9,506	\$60,017	\$20,323		\$1,198	\$10,970	\$24,503		\$34,922	\$37,758	\$2,520	\$31,672	13
	15	271	114		1	10	117		41	137	2	24	14
	\$6,256	\$57,313	\$16,752		\$1,000	\$10,520	\$22,222		\$29,622	\$32,736	\$1,920	\$26,600	15
1	7	8	8		1	1	9		11	22	1	10	16
\$208	\$3,349	\$2,704	\$3,571		\$198	\$450	\$2,370		\$5,300	\$5,022	\$600	\$5,072	17
15	174	1,532	246	3	7	121	521	4	469	3,047	14	444	18
8	143	1,246	193	3	6	100	386	4	362	2,607	11	250	19
11	130	1,218	192	1	5	98	410	3	374	2,208	11	342	20
\$6,080	\$80,876	\$556,310	\$125,360	\$520	\$3,610	\$55,145	\$223,254	\$1,236	\$219,011	\$1,328,070	\$7,034	\$140,480	21
10	120	1,131	190	1	5	91	411	3	325	2,251	10	226	22
\$5,880	\$79,892	\$534,695	\$124,541	\$520	\$3,610	\$53,818	\$221,889	\$1,236	\$203,556	\$1,316,008	\$6,494	\$117,667	23
1	4	81	2			5	8		39	38	1	107	24
\$200	\$684	\$20,201	\$819			\$630	\$1,365		\$13,130	\$10,163	\$540	\$30,494	25
		6				2			10	0		0	26
		\$1,324				\$367			\$2,925	\$1,845		\$1,325	27
7	99	903	167	1	3	87	330	3	301	1,424	8	183	28
6	98	909	168	1	2	87	332	2	304	1,434	0	191	29
7	100	946	174	1	4	80	353	3	310	1,536	10	216	30
12	133	1,114	185	1	4	88	404	3	348	2,038	11	210	31
14	148	1,272	212	1	7	90	480	3	376	2,486	11	240	32
14	151	1,303	236	1	6	93	496	3	380	2,851	11	252	33
13	162	1,350	217	1	7	98							

TABLE 9.—BUTTER, CHEESE, AND CONDENSED MILK—

		Nebraska.	Nevada.	New Hampshire.	New Jersey.	New York.	North Dakota.	Ohio.
	Materials used—Continued.							
	Aggregate cost—Continued.							
82	In making condensed milk—							
	Total cost.....					\$5,550,298		\$90,282
83	Milk—							
84	Cost.....					254,444,530		4,930,869
	Sugar—					\$3,039,333		\$58,583
85	Pounds.....							
86	Cost.....					28,521,923		40,000
87	Cans, labels, etc.					\$1,395,490		\$2,000
88	Fuel.....	\$18,116	\$2,990	\$11,356	\$6,142	\$1,115,485		\$29,699
89	Rent of power and heat.....	\$5,998		\$55		\$401,727	\$11,033	\$58,891
90	Milk supplies.....	\$2,282	\$131	\$1,103	\$557	\$1,044	\$485	\$239
91	All other materials.....					\$30,084	\$811	\$5,224
92	Freight.....	\$50,689	\$37	\$1,358	\$428	\$26,461	\$2,514	\$29,332
	Products:							\$1,967
93	Aggregate value.....	\$3,326,110	\$196,651	\$864,109	\$395,499	\$31,047,776	\$562,481	\$4,593,222
94	Butter and its by-products—							
	Total value.....	\$3,288,944	\$192,391	\$841,545	\$385,189	\$13,412,638	\$556,910	\$2,738,939
95	Butter—							
	Pounds.....	16,035,468	758,184	3,098,880	1,178,846	58,256,504	3,013,151	11,591,981
96	Value.....	\$3,164,300	\$187,051	\$751,807	\$279,004	\$12,316,059	\$556,408	\$2,534,581
	Packed solid—							
97	Pounds.....	10,573,016	102,537	1,989,873	456,607	46,208,732	2,657,328	7,233,289
98	Value.....	\$2,074,694	\$25,639	\$479,329	\$103,048	\$9,522,572	\$455,758	\$1,527,514
	Prints or rolls—							
99	Pounds.....	5,462,452	655,647	1,103,016	722,239	12,047,772	355,823	4,358,692
100	Value.....	\$1,089,606	\$101,412	\$272,478	\$175,956	\$2,793,487	\$70,650	\$1,007,067
	Cream sold—							
101	Pounds.....	1,077,068		563,651	982,587	5,072,920	120	1,843,868
102	Value.....	\$50,497		\$58,830	\$82,329	\$428,941	\$12	\$116,253
	Skimmed milk sold, fed, or returned to patrons—							
103	Pounds.....	5,232,950	8,830,000	15,490,574	18,143,732	149,823,403		42,713,501
104	Value.....	\$8,617	\$5,340	\$18,281	\$17,980	\$172,438		\$53,607
	Casein dried from skimmed milk—							
105	Pounds.....			199,662	27,375	6,736,506		171,364
106	Value.....			\$11,526	\$1,095	\$310,953		\$8,735
107	All other butter factory products.....	\$35,230		\$1,101	\$4,781	\$184,247	\$490	\$25,863
	Cheese and its by-products—							
108	Total value.....	\$17,166	\$4,260	\$22,564	\$134	\$10,875,457	\$5,571	\$1,695,070
	Cheese—							
109	Pounds.....	158,470	33,000	207,149	6,700	132,836,482	51,894	17,351,773
110	Value.....	\$17,166	\$4,130	\$22,564	\$134	\$10,812,747	\$5,571	\$1,655,963
	Standard factory (cheddars or flats)—							
111	Pounds.....	158,470	33,000	207,149		102,764,597	51,894	13,219,415
112	Value.....	\$17,166	\$4,130	\$22,564		\$8,955,104	\$5,571	\$1,231,779
	Skimmed cheese, any size or form—							
113	Pounds.....				6,700	1,477,512		343,600
114	Value.....				\$134	\$64,050		\$16,194
	Other kinds—							
115	Pounds.....					28,594,373		3,788,758
116	Value.....					\$1,793,593		\$407,990
	Whey sold—							
117	Pounds.....					22,291,343		8,734,667
118	Value.....					\$13,407		\$4,403
	Whey otherwise used—							
119	Pounds.....		260,000			18,387,779		6,768,204
120	Value.....		\$130			\$13,403		\$3,859
121	All other cheese factory products.....					\$35,900		\$30,745
	Condensed milk and its by-products—							
122	Total value.....					\$6,759,681		\$139,063
	Condensed milk—							
123	Pounds.....					102,480,355		1,947,218
124	Value.....					\$6,718,380		\$139,063
	Sweetened—							
125	Pounds.....					78,149,508		260,250
126	Value.....					\$5,433,608		\$15,975
	Unsweetened—							
127	Pounds.....					24,330,847		1,680,968
128	Value.....					\$1,284,712		\$123,088
129	All other condensed-milk factory products.....					\$41,301		
130	All other products not classified.....	\$20,000			\$10,176			\$20,150
	Equipment:							
131	Cream separators, number.....	65	11	42	37	1,219	32	295
132	Branch factories, number.....	12			3	110		40
133	Separating or skimming stations, number.....	5		9	5	270	7	64
	Power:							
134	Number of establishments reporting.....	38	4	31	29	995	50	262
135	Total horsepower.....	901	67	514	353	14,503	618	3,531
	Owned—							
	Engines—							
	Steam—							
136	Number.....	39	4	32	32	1,134	45	279
137	Horsepower.....	810	67	447	353	13,386	549	3,355
	Gas or gasoline—							
138	Number.....	6				35	6	16
139	Horsepower.....	27				207	53	55
	Water wheels—							
140	Number.....			2		27		
141	Horsepower.....			63		665		
	Water motors—							
142	Number.....					1		
143	Horsepower.....					1		
	Electric motors—							
144	Number.....	2				26		33
145	Horsepower.....	40				181		69
146	Other power, horsepower.....					8		42
	Rented—							
	Electric motors—							
147	Number.....			1		5	1	4
148	Horsepower.....			3				
149	Other kind, horsepower.....	24		1		55	10	10
150	Furnished to other establishments, horsepower.....						6	12

BUTTER, CHEESE, AND CONDENSED MILK.

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DETAILED SUMMARY, BY STATES AND TERRITORIES: 1905—Continued.

Oklahoma.	Oregon.	Pennsylvania.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	Wisconsin.	Wyoming.	All other states.	
		\$804,349				\$3,450			\$527,147	\$600,557		\$1,312,202	82
		45,841,050				310,500			26,818,121	28,105,009		63,658,112	83
		\$502,057				\$2,875			\$338,120	\$310,140		\$733,368	84
		4,063,063								4,031,033		4,700,753	85
		\$222,860								\$197,545		\$245,540	86
		\$70,423				\$575			\$189,027	\$305,870		\$333,348	87
\$1,326	\$12,040	\$137,161	\$37,826	\$235	\$1,065	\$10,851	\$58,001	\$326	\$28,195	\$305,870	\$1,020	\$47,000	88
\$180	\$1,240	\$2,817			\$230	\$175	\$308		\$2,474	\$1,434	\$820	\$100	89
\$110	\$1,145	\$21,800	\$3,263	\$37	\$137	\$934	\$6,814	\$24	\$2,005	\$32,186	\$135	\$3,063	90
	\$9,841	\$12,005	\$1,183						\$14,743				91
\$2,000	\$14,430	\$20,586	\$6,884	\$2		\$304	\$23,876		\$4,137	\$31,414	\$350	\$0,331	92
\$88,630	\$1,020,343	\$11,581,115	\$2,182,653	\$11,408	\$62,585	\$963,811	\$6,416,434	\$20,200	\$2,002,576	\$29,004,791	\$114,354	\$1,850,543	93
\$88,630	\$1,324,517	\$9,298,311	\$2,176,732	\$11,408	\$62,585	\$704,310	\$5,082,755	\$20,200	\$2,008,002	\$18,057,205	\$100,173	\$68,800	94
410,100	5,080,500	35,754,841	11,058,460	41,889	200,806	3,586,547	27,256,874	81,803	7,722,011	80,155,975	500,515	223,425	95
\$88,630	\$1,206,891	\$8,691,362	\$2,161,323	\$9,722	\$61,505	\$781,089	\$5,844,144	\$18,946	\$1,008,082	\$18,433,202	\$101,722	\$53,530	96
207,000	855,062	10,000,820	10,835,596	27,789	80,008	164,636	16,210,831	18,318	400,990	60,100,500	110,200	2,500	97
\$41,630	\$103,691	\$2,278,140	\$2,116,000	\$6,107	\$18,875	\$33,100	\$3,400,092	\$3,837	\$120,974	\$14,145,383	\$28,840	\$700	98
200,100	4,224,037	25,094,021	222,864	14,100	170,898	3,421,911	11,046,043	63,485	7,255,012	10,989,370	381,315	220,025	99
\$47,000	\$1,073,200	\$6,413,222	\$44,423	\$3,525	\$42,720	\$748,589	\$2,435,052	\$15,109	\$1,841,708	\$4,287,819	\$77,882	\$53,030	100
	477,218	1,778,703	2,140	14,400		55,046	571,402	3,300	830,002	731,721	44,272	147,536	101
	\$40,708	\$161,913	\$215	\$1,080		\$4,470	\$65,622	\$165	\$89,005	\$61,623	\$4,151	\$15,020	102
	1,010,000	212,880,742	4,491,814	348,480		4,002,080	40,621,876	80,000	2,109,762	102,630,788			103
	\$2,077	\$260,010	\$7,003	\$600		\$6,705	\$53,400	\$100	\$2,980	\$134,826			104
		2,455,091					93,513			04,128			105
		\$123,623					\$5,143			\$4,320			106
	\$14,761	\$165,403	\$7,201		\$600	\$2,455	\$14,477	\$608	\$38,136	\$23,228	\$300	\$250	107
	\$250,340	\$1,024,574				\$102,200	\$433,679		\$103,344	\$10,534,347	\$8,181	\$36,444	108
	2,255,592	11,453,424				1,020,730	4,343,100		021,383	109,423,850	84,000	379,780	109
	\$240,376	\$1,007,815				\$161,721	\$427,586		\$102,001	\$10,488,853	\$8,181	\$36,354	110
	2,214,067	10,573,032				1,020,730	4,271,160		913,383	71,508,002	84,000	258,339	111
	\$244,021	\$943,001				\$161,721	\$416,786		\$101,901	\$6,618,043	\$8,181	\$28,086	112
		521,400							8,000	26,348		44,550	113
		\$20,056							\$940	\$1,054		\$1,000	114
	41,525	358,083					72,000			37,820,440		76,000	115
	\$4,755	\$38,158					\$10,800			\$3,800,766		\$6,278	116
	401,000	5,147,000				308,000			150,000	7,505,855			117
	\$100	\$5,522				\$154			\$75	\$5,353			118
	1,872,077	13,010,333				640,700	5,840,966		240,000	2,071,035			119
	\$804	\$11,237				\$325	\$5,404		\$240	\$5,339			120
							\$680		\$428	\$34,802		\$90	121
		\$1,234,417				\$6,017			\$738,088	\$708,230		\$1,754,290	122
		20,364,700				127,800			13,841,000	11,514,222		28,820,450	123
		\$1,220,002				\$6,917			\$738,088	\$708,230		\$1,600,067	124
		10,100,432								10,380,856		14,080,000	125
		\$1,177,000								\$735,504		\$1,025,072	126
		1,204,268				127,800			13,841,000	1,124,306		13,830,593	127
		\$81,033				\$6,917			\$738,088	\$62,735		\$670,005	128
		\$4,815										\$58,232	129
	\$54,486	\$28,813	\$5,021			\$375			\$51,642	\$5,000			130
4	51	036	120	4	10	65	307	7	48	1,544	5	13	131
3	0	78	3		2	15	11		15	122			132
3	18	204	32	1		13	98	4	8	238		3	133
3	77	500	94	3	0	30	188	3	72	1,250	5	18	134
91	715	0,538	1,410	21	02	813	2,504	14	087	15,302	83	524	135
5	72	718	86	8	2	52	104	3	69	1,334	4	24	136
83	018	0,007	1,235	21	35	762	2,285	14	833	14,791	61	484	137
		16							2	76			138
	8	227	176		24		21		11	315		35	139
		13							1	2			140
		195				5	13		4	24			141
	1					41	212						142
	0								2				143
		2							15				144
		65								4			145
		7					1			26			146
										55			147
1	8	2			2	1	3		14	11	2	1	148
	83	22			3	10	25		112	01	22	5	149
		25					20		12				150

TABLE 10.—BUTTER—DETAILED SUMMARY.

	United States.	Arizona.	Arkansas.	California.	Colorado.	Connecticut.	Delaware.
1 Number of establishments.....	5,235	5	3	231	12	41	11
2 Capital:							
3 Total.....	\$30,080,419	\$179,721	\$11,210	\$1,525,634	\$550,403	\$159,447	\$63,147
4 Land.....	\$1,762,633	\$20,100	\$850	\$150,306	\$57,630	\$11,300	\$2,200
5 Buildings.....	\$9,158,088	\$35,073	\$3,000	\$315,142	\$78,771	\$61,603	\$11,600
6 Machinery, tools, and implements.....	\$11,800,637	\$89,792	\$5,300	\$620,930	\$135,465	\$35,171	\$33,225
7 Cash and sundries.....	\$7,359,061	\$34,756	\$2,060	\$439,256	\$278,537	\$51,373	\$16,122
8 Proprietors and firm members.....	3,497	2	3	218	8	17	14
9 Salaried officials, clerks, etc.:							
10 Total number.....	3,017	7	1	113	28	28	4
11 Total salaries.....	\$976,069	\$7,460	\$1,000	\$65,779	\$31,156	\$15,289	\$2,160
12 Officers of corporations—							
13 Number.....	516	3	—	25	3	2	—
14 Salaries.....	\$260,762	\$3,180	—	\$14,312	\$9,000	\$2,120	—
15 General superintendents, managers, clerks, etc.—							
16 Total number.....	2,501	4	1	88	25	26	4
17 Total salaries.....	\$715,307	\$4,280	\$1,000	\$51,467	\$22,156	\$13,169	\$2,100
18 Men—							
19 Number.....	2,283	4	1	69	23	25	3
20 Salaries.....	\$628,130	\$4,280	\$1,000	\$42,897	\$21,320	\$13,145	\$1,740
21 Women—							
22 Number.....	218	—	—	19	2	1	1
23 Salaries.....	\$57,177	—	—	\$8,570	\$836	\$24	\$420
24 Wage-earners, including pieceworkers, and total wages:							
25 Greatest number employed at any one time during the year.....	11,604	48	4	527	109	99	30
26 Least number employed at any one time during the year.....	9,278	28	4	443	66	95	25
27 Average number.....	9,530	30	4	446	80	95	25
28 Total wages.....	\$5,405,872	\$21,892	\$2,240	\$321,451	\$51,654	\$57,155	\$12,038
29 Men 16 years and over—							
30 Average number.....	9,277	30	4	436	67	95	25
31 Wages.....	\$5,325,662	\$21,892	\$2,240	\$317,749	\$45,932	\$57,155	\$12,038
32 Women 16 years and over—							
33 Average number.....	218	—	—	10	19	—	—
34 Wages.....	\$73,536	—	—	\$3,702	\$5,722	—	—
35 Children under 16 years—							
36 Average number.....	35	—	—	—	—	—	—
37 Wages.....	\$6,674	—	—	—	—	—	—
38 Average number of wage-earners, including pieceworkers, employed during each month:							
39 Men 16 years and over—							
40 January.....	7,636	24	4	377	60	94	25
41 February.....	7,972	24	4	384	60	94	24
42 March.....	8,287	27	4	427	60	93	26
43 April.....	9,225	43	4	458	65	94	25
44 May.....	10,054	32	4	470	73	95	25
45 June.....	10,528	33	4	479	82	97	25
46 July.....	10,642	34	4	473	81	97	25
47 August.....	10,493	34	4	461	79	97	25
48 September.....	10,024	32	4	454	69	96	25
49 October.....	9,337	27	4	430	60	95	25
50 November.....	8,633	25	4	412	58	94	25
51 December.....	8,190	25	4	407	57	94	25
52 Women 16 years and over—							
53 January.....	162	—	—	10	14	—	—
54 February.....	163	—	—	10	15	—	—
55 March.....	173	—	—	10	15	—	—
56 April.....	188	—	—	10	19	—	—
57 May.....	239	—	—	10	19	—	—
58 June.....	284	—	—	10	25	—	—
59 July.....	306	—	—	10	27	—	—
60 August.....	276	—	—	10	25	—	—
61 September.....	245	—	—	10	21	—	—
62 October.....	219	—	—	10	19	—	—
63 November.....	188	—	—	10	14	—	—
64 December.....	173	—	—	10	15	—	—
65 Children under 16 years—							
66 January.....	21	—	—	—	—	—	—
67 February.....	21	—	—	—	—	—	—
68 March.....	32	—	—	—	—	—	—
69 April.....	24	—	—	—	—	—	—
70 May.....	44	—	—	—	—	—	—
71 June.....	45	—	—	—	—	—	—
72 July.....	49	—	—	—	—	—	—
73 August.....	50	—	—	—	—	—	—
74 September.....	42	—	—	—	—	—	—
75 October.....	41	—	—	—	—	—	—
76 November.....	29	—	—	—	—	—	—
77 December.....	22	—	—	—	—	—	—
78 Miscellaneous expenses:							
79 Total.....	\$2,811,247	\$12,226	\$553	\$163,942	\$54,635	\$24,391	\$9,447
80 Rent of works.....	\$181,228	\$60	—	\$32,735	\$5,586	\$350	\$956
81 Taxes.....	\$158,510	\$944	\$57	\$8,962	\$834	\$792	\$187
82 Rent of offices, insurance, interest and all sundry expenses not hitherto included.....	\$2,435,593	\$11,222	\$496	\$121,656	\$48,215	\$23,249	\$8,304
83 Contract work.....	\$35,916	—	—	\$589	—	—	—
84 Materials used:							
85 Aggregate cost.....	\$101,290,711	\$189,644	\$27,879	\$5,760,823	\$1,013,639	\$670,321	\$159,846
86 In making butter—							
87 Total cost.....	\$97,920,970	\$157,888	\$27,262	\$5,650,462	\$966,922	\$660,290	\$156,463
88 Milk bought or received from patrons—							
89 Pounds.....	8,255,672,291	17,083,390	2,574,439	427,067,166	17,587,554	3,405,826	17,633,187
90 Cost.....	\$66,633,063	\$122,784	\$25,694	\$3,904,125	\$148,966	\$34,761	\$154,338
91 Gathered cream—							
92 Pounds.....	587,135,199	332,376	7,461	29,435,344	15,555,407	12,477,322	—
93 Cost.....	\$28,319,199	\$22,069	\$278	\$1,659,258	\$780,579	\$617,164	—
94 Tubs, boxes, color, salt, etc.....	\$2,968,708	\$3,035	\$1,290	\$87,079	\$37,377	\$8,365	\$2,125
95 In making cheese—							
96 Total cost.....	\$568,276	\$13,422	—	\$10,914	\$12,766	—	—
97 Milk bought or received from patrons—							
98 Pounds.....	68,065,813	1,637,900	—	1,267,240	1,350,000	—	—
99 Cost.....	\$526,889	\$12,882	—	\$10,675	\$12,150	—	—
100 Skimmed milk bought or received from patrons—							
101 Pounds.....	6,438,383	—	—	—	—	—	—
102 Cost.....	\$11,345	—	—	—	—	—	—
103 Boxes, salt, etc.....	\$30,042	\$540	—	\$239	\$606	—	—

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Georgia.	Idaho.	Illinois.	Indiana.	Iowa.	Kansas.	Kentucky.	Maine.	Maryland.	Massachu- setts.	Michigan.	Minnesota.	Missouri.	
6	12	349	63	607	67	3	30	55	30	203	712	37	1
\$26,300	\$41,165	\$1,545,506	\$319,732	\$2,806,725	\$1,054,550	\$10,250	\$306,401	\$175,028	\$210,557	\$980,720	\$3,101,859	\$510,771	2
\$7,400	\$2,885	\$96,861	\$17,635	\$159,277	\$144,545	\$250	\$22,128	\$0,355	\$12,025	\$45,205	\$102,277	\$67,064	3
\$7,000	\$14,550	\$541,030	\$77,585	\$973,018	\$398,885	\$1,500	\$103,481	\$38,058	\$85,101	\$302,413	\$1,130,088	\$96,062	4
\$10,500	\$15,050	\$861,080	\$136,384	\$1,007,635	\$710,350	\$4,400	\$80,311	\$85,837	\$38,804	\$453,317	\$1,414,475	\$210,320	5
\$800	\$7,780	\$246,429	\$88,128	\$576,805	\$700,770	\$13,100	\$171,481	\$44,778	\$73,727	\$179,525	\$475,810	\$145,735	6
4	4	233	51	313	57	6	15	71	12	91	254	26	7
	13	211	60	777	100		23	5	47	139	222	49	8
	\$1,712	\$53,474	\$17,298	\$134,881	\$73,851	\$2,050	\$9,011	\$2,306	\$0,330	\$47,001	\$61,065	\$32,648	9
	1	10	12	97	10		3	1		09	5	5	10
	\$312	\$7,464	\$2,655	\$29,110	\$20,350		\$3,354	\$00		\$14,250	\$11,175	\$0,408	11
	12	192	48	680	81	3	20	4	47	70	217	44	12
	\$1,400	\$46,040	\$14,613	\$105,771	\$53,501	\$2,050	\$5,557	\$2,240	\$0,330	\$32,745	\$40,800	\$26,240	13
	12	181	46	653	55	3	14	4	44	62	207	33	14
	\$1,400	\$40,732	\$14,633	\$94,039	\$43,234	\$2,050	\$3,266	\$2,246	\$8,024	\$31,083	\$46,022	\$20,456	15
		11	2	27	20		2		3	8	10	11	16
		\$5,288	\$610	\$11,732	\$10,207		\$2,291		\$706	\$1,662	\$3,868	\$5,784	17
17	15	624	180	1,380	472	12	91	92	74	553	1,121	233	18
10	14	504	159	1,031	337	12	78	82	65	469	1,010	123	19
14	12	507	164	1,121	392	12	74	80	64	456	908	130	20
\$3,064	\$0,380	\$204,341	\$86,543	\$667,560	\$178,606	\$5,290	\$44,580	\$20,035	\$40,803	\$237,218	\$607,248	\$64,371	21
14	12	491	163	1,093	343	12	72	76	63	446	905	125	22
\$3,064	\$0,380	\$288,840	\$80,333	\$658,938	\$161,225	\$5,290	\$44,194	\$28,485	\$40,179	\$234,508	\$606,078	\$61,870	23
		14	1	23	39		2	2	1	0	2	10	24
		\$5,190	\$210	\$8,011	\$15,500		\$386	\$330	\$624	\$2,514	\$480	\$2,436	25
		2		5	10			2		1	1	1	26
		\$305		\$620	\$1,881			\$220		\$130	\$90	\$65	27
12	12	424	152	904	307	12	61	68	50	378	913	110	28
12	12	429	152	903	311	12	61	69	50	380	910	109	29
12	12	440	153	981	322	12	61	71	58	397	921	111	30
17	12	480	157	1,001	338	12	70	73	64	431	995	113	31
17	12	499	160	1,130	370	12	80	78	68	483	1,040	132	32
17	12	550	173	1,260	380	12	84	84	70	512	1,081</		

TABLE 10.—BUTTER—DETAILED SUMMARY,

	United States.	Arizona.	Arkansas.	California.	Colorado.	Connecticut.	Delaware.
Materials used—Continued.							
Aggregate cost—Continued.							
In making condensed milk—							
82 Total cost.....	\$157,808	\$4,365		\$2,875			
83 Milk—							
84 Pounds.....	15,480,789	215,000		250,000			
85 Cost.....	\$145,274	\$2,365		\$2,875			
86 Sugar—							
87 Pounds.....	101,690						
88 Cost.....	\$5,257						
89 Cans, labels, etc.....	\$7,277	\$2,000					
90 Fuel.....	\$1,607,288	\$12,340	\$942	\$70,469	\$6,200	\$6,113	\$3,115
91 Rent of power and heat.....	\$48,019			\$10,633	\$6,922		
92 Mill supplies.....	\$167,575	\$580	\$55	\$5,771	\$570	\$411	\$268
93 All other materials.....	\$373,170	\$1,049		\$775	\$5,701		
94 Freight.....	\$447,599			\$19,933	\$14,559	\$3,507	
Products:							
95 Aggregate value.....	\$118,520,999	\$267,495	\$33,081	\$6,891,992	\$1,198,839	\$814,703	\$197,422
96 Butter and its by-products—							
97 Total value.....	\$116,752,227	\$222,890	\$33,081	\$6,850,205	\$1,160,999	\$813,503	\$197,422
98 Packed solid—							
99 Pounds.....	359,171,280	2,500	109,309	3,068,637	402,841	272,974	27,000
100 Value.....	\$73,363,274	\$600	\$24,534	\$742,529	\$83,720	\$64,739	\$5,160
101 Prints or rolls—							
102 Pounds.....	166,075,562	796,033	18,000	23,065,727	4,651,165	2,630,303	617,823
103 Value.....	\$38,472,317	\$102,102	\$3,802	\$5,873,156	\$984,994	\$683,808	\$150,877
104 Cream sold—							
105 Pounds.....	27,621,737	229,249	60,000	921,334	931,560	695,201	422,800
106 Value.....	\$2,321,780	\$23,359	\$4,500	\$132,277	\$71,350	\$56,526	\$32,196
107 Skimmed milk sold, fed, or returned to patrons—							
108 Pounds.....	1,151,219,754			77,531,727	4,073,000	1,801,530	12,010,018
109 Value.....	\$1,357,774			\$63,332	\$5,938	\$2,481	\$6,829
110 Casein dried from skimmed milk—							
111 Pounds.....	10,720,499			113,256			70,000
112 Value.....	\$516,369			\$4,572			\$2,300
113 All other butter factory products.....	\$720,713	\$6,829	\$245	\$34,339	\$14,997	\$5,949	\$60
114 Cheese and its by-products—							
115 Total value.....	\$697,664	\$17,125		\$13,282	\$15,440		
116 Standard factory (cheddars or flats)—							
117 Pounds.....	5,180,446	161,796		127,224	135,000		
118 Value.....	\$493,740	\$17,125		\$13,082	\$14,850		
119 Skimmed cheese, any size or form—							
120 Pounds.....	626,617						
121 Value.....	\$22,052						
122 Other kinds—							
123 Pounds.....	2,445,182						
124 Value.....	\$179,947						
125 Whey sold—							
126 Pounds.....	1,697,134						
127 Value.....	\$850						
128 Whey otherwise used—							
129 Pounds.....	1,486,000				1,180,000		
130 Value.....	\$855				\$590		
131 All other cheese factory products.....	\$220			\$200			
132 Condensed milk and its by-products—							
133 Total value.....	\$227,601	\$8,100		\$4,000			
134 Condensed milk, sweetened—							
135 Pounds.....	467,879						
136 Value.....	\$26,040						
137 Condensed milk, unsweetened—							
138 Pounds.....	4,771,902	162,000		100,000			
139 Value.....	\$201,521	\$8,100		\$4,000			
140 All other condensed milk factory products.....	\$40						
141 All other products not classified.....	\$843,507	\$19,380		\$24,505	\$22,400	\$1,200	
142 Equipment:							
143 Cream separators, number.....	8,416	12	4	315	14	18	21
144 Branch factories, number.....	507			7	1		1
145 Separating or skimming stations, number.....	1,602	4		67	16		9
146 Power:							
147 Number of establishments reporting.....	5,130	5	3	225	12	40	11
148 Total horsepower.....	77,777	263	42	2,713	430	299	165
149 Owned—							
150 Engines—							
151 Steam—							
152 Number.....	5,712	8	3	199	15	38	15
153 Horsepower.....	73,280	185	42	2,167	380	291	165
154 Gas or gasoline—							
155 Number.....	206	1		25		2	
156 Horsepower.....	1,492	3		164		8	
157 Waterwheels—							
158 Number.....	69			5			
159 Horsepower.....	854			27			
160 Water motors—							
161 Number.....	5			3			
162 Horsepower.....	23			7			
163 Electric motors—							
164 Number.....	21			2	5		
165 Horsepower.....	254			8	50		
166 Other power, horsepower.....	190	75		25			
167 Rented—							
168 Electric motors—							
169 Number.....	130			40			
170 Horsepower.....	1,570			304			
171 Other kind, horsepower.....	114			11			
172 Furnished to other establishments, horsepower.....	74				12		

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[illegible]

TABLE 10.—BUTTER—DETAILED SUMMARY,

		Nebraska.	Nevada.	New Hamp- shire.	New Jersey.	New York.	North Dakota.	Ohio.
1	Number of establishments.....	36	4	31	29	543	56	154
2	Capital:							
3	Total.....	\$1,852,821	\$57,064	\$159,006	\$135,481	\$3,146,913	\$196,678	\$848,760
4	Land.....	\$68,248	\$1,370	\$8,650	\$7,120	\$172,409	\$8,132	\$78,555
5	Buildings.....	\$429,709	\$27,807	\$66,750	\$35,481	\$1,115,930	\$88,132	\$275,041
6	Machinery, tools, and implements.....	\$454,068	\$16,100	\$52,605	\$64,260	\$1,309,137	\$86,088	\$338,715
7	Cash and sundries.....	\$899,896	\$11,787	\$31,001	\$28,620	\$549,437	\$14,326	\$155,849
8	Proprietors and firm members.....	20		18	26	479	17	134
9	Salaries of officials, clerks, etc.:							
10	Total number.....	113	1	20	5	109	24	50
11	Total salaries.....	\$102,053	\$240	\$6,188	\$1,170	\$60,429	\$1,491	\$14,860
12	Officers of corporations—							
13	Number.....	14		3		35		3
14	Salaries.....	\$30,300		\$920		\$23,106		\$400
15	General superintendents, managers, clerks, etc.—							
16	Total number.....	99	1	17	5	74	24	47
17	Total salaries.....	\$71,753	\$240	\$5,568	\$1,170	\$37,323	\$1,491	\$14,460
18	Men—							
19	Number.....	74	1	14	5	71	24	43
20	Salaries.....	\$58,051	\$240	\$4,458	\$1,170	\$36,083	\$1,491	\$13,115
21	Women—							
22	Number.....	25		3		3		4
23	Salaries.....	\$13,702		\$1,110		\$1,240		\$1,345
24	Wage-earners, including pieceworkers, and total wages:							
25	Greatest number employed at any one time during the year.....	363	10	74	50	1,271	78	290
26	Least number employed at any one time during the year.....	201	10	58	44	926	60	251
27	Average number.....	251	10	61	43	963	53	241
28	Total wages.....	\$135,787	\$9,030	\$35,481	\$21,075	\$523,202	\$37,256	\$147,403
29	Men 16 years and over—							
30	Average number.....	218	10	59	41	955	53	237
31	Wages.....	\$123,563	\$9,030	\$34,581	\$20,590	\$520,718	\$37,256	\$146,538
32	Women 16 years and over—							
33	Average number.....	33		2	1	7		3
34	Wages.....	\$12,224		\$900	\$360	\$2,328		\$660
35	Children under 16 years—							
36	Average number.....				1	1		1
37	Wages.....				\$125	\$156		\$205
38	Average number of wage-earners, including pieceworkers, employed during each month:							
39	Men 16 years and over—							
40	January.....	177	10	54	41	660	37	207
41	February.....	173	10	55	41	671	39	203
42	March.....	184	10	56	38	748	39	209
43	April.....	219	10	58	44	965	46	223
44	May.....	240	10	61	43	1,113	57	257
45	June.....	284	10	64	44	1,196	69	270
46	July.....	279	10	64	43	1,223	76	276
47	August.....	274	10	62	43	1,184	72	269
48	September.....	239	10	62	41	1,113	63	255
49	October.....	202	10	50	36	1,007	52	237
50	November.....	175	10	57	39	853	44	224
51	December.....	170	10	56	30	727	42	214
52	Women 16 years and over—							
53	January.....	23		2	1	4		3
54	February.....	23		2	1	4		3
55	March.....	23		2	1	6		3
56	April.....	24		2	1	7		3
57	May.....	28		2	1	8		3
58	June.....	51		2	1	9		3
59	July.....	57		2	1	10		3
60	August.....	53		2	1	10		3
61	September.....	40		2	1	8		2
62	October.....	31		2	1	7		3
63	November.....	21		2	1	6		3
64	December.....	22		2	1	5		3
65	Children under 16 years—							
66	January.....							
67	February.....							
68	March.....							
69	April.....							
70	May.....				2			2
71	June.....				2			2
72	July.....				2			2
73	August.....				2			2
74	September.....				2			2
75	October.....				2			2
76	November.....				2			2
77	December.....				2			2
78	Miscellaneous expenses:							
79	Total.....	\$184,959	\$2,433	\$21,928	\$10,909	\$197,857	\$10,443	\$39,720
80	Rent of works.....	\$5,580			\$1,124	\$15,017	\$1,207	\$4,465
81	Taxes.....	\$7,426	\$370	\$1,111	\$582	\$14,587	\$956	\$5,113
82	Rent of offices, insurance, interest, and all sundry expenses not hitherto included.....	\$171,953	\$2,063	\$20,354	\$9,203	\$166,914	\$8,280	\$29,692
83	Contract work.....					\$1,339		\$450
84	Materials used:							
85	Aggregate cost.....	\$2,657,741	\$161,120	\$710,118	\$317,752	\$10,955,980	\$474,344	\$2,196,605
86	In making butter—							
87	Total cost.....	\$2,581,152	\$154,905	\$696,407	\$310,625	\$10,517,202	\$459,599	\$2,109,250
88	Milk bought or received from patrons—							
89	Pounds.....	156,377,090	15,768,403	45,963,092	31,059,303	1,184,679,084	35,936,537	211,119,460
90	Cost.....	\$971,483	\$140,572	\$465,443	\$302,922	\$9,885,455	\$233,986	\$1,728,240
91	Gathered cream—							
92	Pounds.....	32,312,868	231,900	4,298,756	4,950	5,850,805	4,795,099	6,582,108
93	Cost.....	\$1,497,411	\$12,186	\$206,566	\$190	\$276,563	\$202,805	\$337,790
94	Tubs, boxes, color, salt, etc.....	\$112,258	\$2,147	\$24,398	\$7,513	\$355,184	\$22,808	\$43,220
95	In making cheese—							
96	Total cost.....		\$3,057			\$198,765		\$31,023
97	Milk bought or received from patrons—							
98	Pounds.....		300,000			23,325,017		3,779,897
99	Cost.....		\$3,000			\$184,588		\$25,541
100	Skimmed milk bought or received from patrons—							
101	Pounds.....					854,038		2,313,950
102	Cost.....					\$1,396		\$1,420
103	Boxes, salt, etc.....		\$57			\$12,781		\$1,062

¹ Includes establishments distributed as follows: Montana, 2; Rhode Island, 1; West Virginia, 1.

BUTTER, CHEESE, AND CONDENSED MILK.

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BY STATES AND TERRITORIES: 1905--Continued.

Oklahoma.	Oregon.	Pennsylvania.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	Wisconsin.	Wyoming.	All other states. ¹	
3	07	510	07	3	10	39	172	4	08	002	5	4	1
\$15,700	\$376,532	\$2,617,024	\$184,139	\$8,300	\$34,470	\$388,830	\$925,801	\$10,120	\$494,925	\$3,630,880	\$37,083	\$10,000	2
\$800	\$18,825	\$121,195	\$18,938	\$250	\$5,070	\$10,925	\$37,565	\$1,800	\$20,418	\$189,170	\$000	\$2,050	3
\$2,000	\$51,000	\$818,363	\$158,808	\$2,000	\$7,150	\$72,730	\$288,671	\$3,400	\$56,636	\$1,363,200	\$5,400	\$3,300	4
\$8,650	\$153,177	\$1,101,335	\$213,285	\$3,550	\$10,780	\$117,078	\$319,301	\$3,000	\$152,679	\$1,543,820	\$12,531	\$3,000	5
\$4,250	\$152,870	\$572,831	\$93,108	\$2,500	\$5,470	\$188,097	\$280,324	\$1,020	\$205,192	\$534,630	\$19,452	\$1,950	6
4	72	195	32	2	12	34	85	0	49	605	3	5	7
1	32	267	126		2	23	121		38	252	3		8
\$208	\$16,016	\$52,221	\$26,293		\$1,198	\$15,770	\$26,523		\$30,602	\$50,286	\$2,520		9
	11	27	4			3	7		12	133			10
	\$6,700	\$20,480	\$5,970			\$1,800	\$5,355		\$13,030	\$26,200			11
1	21	240	122		2	20	114		26	119	3		12
\$208	\$9,346	\$31,732	\$20,323		\$1,198	\$10,970	\$21,168		\$17,572	\$24,020	\$2,520		13
	14	234	114		1	19	105		22	101	2		14
	\$6,000	\$30,428	\$16,752		\$1,000	\$10,520	\$18,798		\$16,072	\$19,839	\$1,920		15
1	7	6	8		1	1	9		4	18	1		16
\$208	\$3,340	\$1,304	\$3,571		\$198	\$450	\$2,370		\$1,500	\$4,181	\$000		17
15	131	1,112	246	3	7	103	457	4	245	1,440	14	4	18
8	106	983	193	3	6	62	328	4	202	1,233	11	4	19
11	100	916	192	1	5	87	376	3	206	1,252	11	2	20
\$0,080	\$63,280	\$442,441	\$125,360	\$520	\$3,010	\$40,357	\$200,281	\$1,236	\$141,119	\$719,614	\$7,034	\$1,319	21
10	06	928	190	1	5	81	370	3	190	1,247	10	2	22
\$5,880	\$62,305	\$436,020	\$124,541	\$520	\$3,010	\$48,130	\$190,316	\$1,236	\$138,607	\$718,440	\$6,404	\$1,310	23
1	4	14	2			4	0		4	4	1		24
\$200	\$981	\$5,188	\$819			\$330	\$965		\$1,457	\$670	\$540		25
		4				2			3	1			26
		\$1,224				\$397			\$1,055	\$105			27
7	74	792	167	1	3	70	306	3	180	1,075	8	2	28
6	70	795	168	1	2	78	308	2	181	1,083	9	2	29
7	87	823	174	1	4	78	329	3	187	1,100	10	2	30
12	100	934	185	1	4	78	374	3	206	1,224	11	2	31
14	111	1,000	212	1	7	80	424	3	213	1,337	11	2	32
14	113	998	220	1	6	82	437	3	213	1,384	11	2	33
13	121	1,046	217	1	7	86	434	3	216	1,399	11	2	34
13	115	1,033	211	1	7	87	425	3	220	1,387	11	2	35
13	104	1,015	199	1	7	85	400	3	212	1,351	11	2	36
7	83	967	185	1	6	81	374	4	195	1,278	10	2	37
7	83	962	172	1	5	79	331	3	184	1,199	9	2	38
7	75	831	164	1	3	79	292	3	181	1,138	8	2	39
	4	12				2	4		4	3	1		40
	4	12				2	4		4	3	1		41
	4	12				2	5		4	3	1		42
2	4	12				2	7		3	4	1		43
2	4	14	3			2	8		4	5	1		44
2	5	15	4			2	7		4	5	1		45
2	5	16	4			2	7		4	5	1		46
2	5	17	4			2	7		4	5	1		47
2	4	16	4			2	7		5	5	1		48
	3	15	3			10	8		4	4	1		49
	3	14	1			10	4		4	3	1		50
	3	13	1			10	4		4	3	1		51
		3				2							52
		3				2							53
		3				2			10				54
		3				2							55
		4				2							56
		5				2			4				57
		5				2							58
		6				2			8				59
		5				2							60
		5				2			5				61
		3				2							62
		3				2							63
		3				2							64
\$1,031	\$35,704	\$162,710	\$57,253	\$178	\$1,835	\$44,404	\$95,440	\$1,411	\$48,280	\$330,000	\$1,715	\$400	65
\$300	\$5,161	\$22,398	\$11,208	\$120	\$750	\$6,480	\$7,335	\$108	\$8,145	\$13,000	\$300	\$144	66
\$151	\$1,003	\$0,832	\$5,084	\$18	\$100	\$2,118	\$5,240	\$65	\$2,419	\$20,030	\$105	\$10	67
\$1,180	\$28,600	\$120,078	\$62,000	\$40	\$085	\$35,080	\$62,300	\$1,238	\$37,725	\$200,000	\$1,250	\$345	68
		\$518	\$302			\$720	\$20,550			\$0,007			69
\$65,741	\$1,156,148	\$7,920,511	\$1,833,356	\$0,627	\$48,085	\$730,518	\$5,435,408	\$16,180	\$1,708,376	\$16,501,810	\$94,044	\$20,184	70
\$62,125	\$1,115,352	\$7,780,041	\$1,784,200	\$0,253	\$47,403	\$641,007	\$5,340,676	\$15,830	\$1,723,502	\$16,087,816	\$85,759	\$28,803	71
	64,300,792	780,045,081	73,255,307	1,015,158	4,350,048	64,068,502	208,537,107	1,774,000	30,432,853	1,500,842,690	4,830,206	1,153,284	72
	\$402,405	\$7,400,845	\$474,138	\$0,053	\$35,170	\$424,037	\$2,020,254	\$15,008	\$202,420	\$12,051,200	\$35,161	\$10,452	73
1,247,000	10,500,043	4,167,213	25,263,002		233,631	3,007,136	40,741,442		23,675,608	80,031,900	1,141,500	236,000	74
\$68,380	\$602,520	\$210,275	\$1,236,721		\$10,881	\$107,525	\$2,520,616		\$1,405,272	\$3,554,003	\$46,800	\$17,880	75
\$3,745	\$20,328	\$118,021	\$73,341	\$200	\$1,433	\$18,905	\$202,806	\$102	\$26,810	\$481,857	\$3,720	\$601	76
	\$4,500	\$7,804				\$84,095			\$10,346	\$76,608	\$0,860		77
	502,053	1,000,380				10,882,690			1,072,404	9,585,342	953,064		78
	\$4,307	\$7,314				\$80,011			\$10,027	\$72,072	\$0,510		79
										150,000			80
										\$300			81
	\$202	\$550				\$3,184			\$310	\$3,726	\$350		

TABLE 10.—BUTTER—DETAILED SUMMARY.

	Nebraska.	Nevada.	New Hamp- shire.	New Jersey.	New York.	North Dakota.	Ohio.
Materials used—Continued.							
Aggregate cost—Continued.							
In making condensed milk—							
82 Total cost.....					\$38,879		
83 Milk—							
84 Pounds.....					3,633,847		
85 Cost.....					\$38,728		
86 Sugar—							
87 Pounds.....							
88 Cost.....					\$151		
89 Cans, labels, etc.....							
90 Fuel.....	\$17,634	\$2,000	\$11,195	\$6,142	\$176,198	\$10,945	\$30,708
91 Rent of power and heat.....	\$5,968		\$55		\$1,094	\$485	\$239
92 Mill supplies.....	\$2,271	\$131	\$1,103	\$557	\$13,895	\$811	\$3,695
93 All other materials.....							\$20,332
94 Freight.....	\$50,086	\$37	\$1,358	\$428	\$9,947	\$2,504	\$1,448
Products:							
95 Aggregate value.....	\$3,308,944	\$196,651	\$841,545	\$395,499	\$12,775,608	\$556,910	\$2,688,346
96 Butter and its by-products—							
97 Total value.....	\$3,288,944	\$192,391	\$841,545	\$385,189	\$12,489,276	\$556,910	\$2,628,070
98 Packed solid—							
99 Pounds.....	10,573,016	102,537	1,989,873	456,607	42,688,793	2,657,328	6,715,685
100 Value.....	\$2,074,694	\$25,639	\$479,329	\$103,048	\$8,768,234	\$485,758	\$1,427,175
101 Prints or rolls—							
102 Pounds.....	5,462,452	655,647	1,109,016	722,239	11,664,445	355,823	4,316,678
103 Value.....	\$1,089,606	\$161,412	\$272,478	\$175,956	\$2,698,183	\$70,650	\$997,803
104 Cream sold—							
105 Pounds.....	1,077,068		563,651	982,587	4,672,586	120	1,832,728
106 Value.....	\$80,497		\$58,830	\$82,329	\$395,122	\$12	\$115,386
107 Skimmed milk sold, fed, or returned to patrons—							
108 Pounds.....	5,232,950	8,830,000	15,490,574	18,143,732	143,338,959		42,555,601
109 Value.....	\$8,917	\$5,340	\$18,281	\$17,980	\$165,415		\$53,349
110 Casein dried from skimmed milk—							
111 Pounds.....			199,662	27,375	6,115,256		171,364
112 Value.....			\$11,526	\$1,095	\$285,225		\$8,735
113 All other butter factory products.....	\$35,230		\$1,101	\$4,781	\$177,097	\$490	\$25,623
114 Cheese and its by-products—							
115 Total value.....		\$4,260		\$134	\$231,378		\$40,126
116 Standard factory (cheddars or flats)—							
117 Pounds.....		33,000			1,509,680		317,565
118 Value.....		\$4,130			\$133,472		\$31,571
119 Skimmed cheese, any size or form—							
120 Pounds.....				6,700	493,231		88,200
121 Value.....				\$134	\$15,332		\$4,411
122 Other kinds—							
123 Pounds.....					1,090,845		63,910
124 Value.....					\$82,574		\$3,640
125 Whey sold—							
126 Pounds.....							855,784
127 Value.....							\$429
128 Whey otherwise used—							
129 Pounds.....		260,000					30,000
130 Value.....		\$130					\$75
131 All other cheese factory products.....							
132 Condensed milk and its by-products—							
133 Total value.....					\$54,954		
134 Condensed milk, sweetened—							
135 Pounds.....					27,058		
136 Value.....					\$1,457		
137 Condensed milk, unsweetened—							
138 Pounds.....					1,052,540		
139 Value.....					\$53,497		
140 All other condensed-milk factory products.....							
141 All other products not classified.....	\$20,000			\$10,176			\$20,150
Equipment:							
142 Cream separators, number.....	61	11	42	37	1,023	32	262
143 Branch factories, number.....	12			3	74		19
144 Separating or skimming stations, number.....	5		9	5	265	7	62
Power:							
145 Number of establishments reporting.....	35	4	29	29	520	50	152
146 Total horsepower.....	865	67	494	353	8,441	618	2,125
Owned—							
Engines—							
147 Steam—							
148 Number.....	36	4	29	32	636	45	171
149 Horsepower.....	774	67	427	353	8,060	549	2,034
150 Gas or gasoline—							
151 Number.....	6				26	6	9
152 Horsepower.....	27				165	53	33
153 Water wheels—							
154 Number.....			2		19		
155 Horsepower.....			63		183		
156 Water motors—							
157 Number.....							
158 Horsepower.....							
159 Electric motors—							
160 Number.....	2						1
161 Horsepower.....	40						6
162 Other power, horsepower.....							42
Rented—							
163 Electric motors—							
164 Number.....			1		3	1	4
165 Horsepower.....			3		33	10	10
166 Other kind, horsepower.....	24		1			6	
167 Furnished to other establishments, horsepower.....							

BUTTER, CHEESE, AND CONDENSED MILK.

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BY STATES AND TERRITORIES: 1905—Continued.

Oklahoma.	Oregon.	Pennsylvania.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	Wisconsin.	Wyoming.	All other states.
		\$24,347				\$3,450				\$5,290		
		2,114,200				319,500				410,000		
		\$23,535				\$2,875				\$3,340		
		14,100								30,000		
		\$702								\$1,500		
		\$50				\$575				\$150		
\$1,326	\$9,646	\$113,617	\$37,826	\$235	\$1,065	\$0,792	\$55,043	\$326	\$12,063	\$276,280	\$1,020	\$285
\$180	\$1,249	\$2,817			\$280	\$175	\$368		\$2,108	\$1,434		
\$110	\$1,064	\$13,255	\$4,263	\$37	\$137	\$870	\$0,720	\$24	\$1,610	\$28,285	\$135	\$0
	\$0,841	\$12,065	\$1,183						\$14,743			
\$2,000	\$14,430	\$15,885	\$6,884	\$2		\$00	\$23,592		\$3,404	\$26,013	\$350	
\$88,630	\$1,375,008	\$0,304,447	\$2,182,653	\$11,498	\$62,585	\$900,080	\$5,072,628	\$20,200	\$2,157,208	\$18,650,302	\$114,354	\$34,308
\$88,630	\$1,316,020	\$0,241,806	\$2,170,732	\$11,498	\$62,585	\$780,342	\$5,072,628	\$20,200	\$2,093,848	\$18,543,137	\$106,173	\$34,308
207,000	855,062	10,642,320	10,835,596	27,789	86,908	130,000	10,169,831	18,318	403,199	68,625,831	110,200	2,500
\$41,630	\$103,691	\$2,273,635	\$2,116,900	\$0,107	\$18,875	\$26,000	\$3,400,072	\$3,837	\$125,910	\$14,032,950	\$23,840	\$500
209,100	4,180,610	24,804,021	222,804	14,100	170,808	3,418,286	11,041,274	63,485	7,240,612	10,980,376	381,315	79,422
\$47,000	\$1,065,279	\$0,363,232	\$44,423	\$3,525	\$42,720	\$747,712	\$2,434,030	\$15,100	\$1,837,718	\$4,287,819	\$77,882	\$20,938
	477,218	1,778,703	2,140	14,400		55,040	571,402	3,300	830,662	724,221	44,272	118,000
	\$40,708	\$101,013	\$215	\$1,080		\$4,470	\$65,522	\$165	\$89,095	\$40,683	\$4,151	\$12,020
	1,430,800	210,880,742	4,401,814	348,480		4,902,980	40,621,876	80,000	2,109,702	102,095,329		
	\$1,501	\$254,010	\$7,903	\$690		\$5,705	\$53,460	\$100	\$2,989	\$134,131		
		2,455,091					93,513			94,128		
		\$123,623					\$5,143			\$4,326		
	\$14,751	\$65,403	\$7,291		\$900	\$2,455	\$14,302	\$908	\$38,130	\$23,228	\$300	\$250
	\$5,162	\$8,520				\$107,340			\$11,778	\$63,778	\$8,181	
	50,485	107,047				1,088,275			111,125	813,400	84,000	
	\$5,102	\$8,520				\$107,102			\$11,778	\$78,040	\$8,181	
										15,000		
										\$600		
										137,304		
										\$15,071		
						308,000				133,350		
						\$154				\$17		
	16,000											
	\$60											
		\$30,308				\$0,017				\$8,387		
		45,020								134,000		
		\$1,773								\$8,387		
		600,068				127,800						
		\$28,535				\$0,017						
	\$54,480	\$20,813	\$5,021			\$376			\$51,042	\$5,000		
4	48	927	120	4	10	61	302	7	46	1,454	5	3
3	9	60	3		2	15	8		15	84		
3	18	204	32	1		13	08	4	8	237		
3	65	517	04	3	6	34	170	3	04	881	5	4
61	641	8,605	1,410	21	02	776	2,382	14	775	12,340	83	32
5	62	672	86	3	2	47	176	3	50	1,000	4	4
83	540	8,130	1,235	21	35	725	2,115	14	626	11,000	01	32
	1	14	20		2		2		2	38		
	3	205	175		24		0		11	224		
		13				5	13		1	2		
		105				41	212		4	24		
	1								1			
	6								10			
		2								3		
		55								14		
		7					1			27		
1	8	2			2	1	3		14	11	2	141
	83	22			3	10	25		112	91	22	142
		25					20		12			143
		40										144

TABLE 11.—CHEESE—DETAILED

		United States.	California.	Colorado.	Idaho.	Illinois.	Indiana.	Iowa.	Kansas.	Maine.	Michigan.
1	Number of establishments.....	3,610	44	8	4	41	24	48	23	10	162
2	Capital:										
3	Total.....	\$9,232,182	\$107,945	\$42,824	\$2,400	\$74,436	\$42,220	\$112,367	\$37,994	\$18,964	\$370,798
4	Land.....	\$361,207	\$16,720	\$2,300	\$125	\$8,150	\$2,970	\$10,195	\$1,500	\$250	\$15,360
5	Buildings.....	\$2,924,748	\$24,020	\$12,500	\$950	\$30,300	\$14,220	\$42,363	\$18,957	\$7,500	\$133,211
6	Machinery, tools, and implements.....	\$1,810,074	\$20,632	\$10,800	\$1,325	\$17,060	\$15,310	\$30,485	\$9,280	\$6,825	\$105,642
7	Cash and sundries.....	\$1,136,153	\$49,573	\$17,224	.....	\$18,926	\$9,720	\$29,324	\$8,257	\$4,389	\$116,585
8	Proprietors and firm members.....	3,289	51	8	5	37	21	48	31	6	165
9	Salaried officials, clerks, etc.:—										
10	Total number.....	177	1	.....	.....	5	5	25	2	1	11
11	Total salaries.....	\$36,696	\$900	.....	.....	\$3,049	\$1,720	\$2,078	\$685	\$12	\$4,040
12	Officers of corporations—										
13	Number.....	55	.....	.....	.....	3	.....	13	1	.....	5
14	Salaries.....	\$5,433	.....	.....	.....	\$2,444	.....	\$627	\$25	.....	\$766
15	General superintendents, managers, clerks, etc.—										
16	Total number.....	122	1	.....	.....	2	5	12	1	1	6
17	Total salaries.....	\$31,263	\$900	.....	.....	\$605	\$1,720	\$1,451	\$660	\$12	\$3,274
18	Men—										
19	Number.....	115	1	.....	.....	2	3	12	1	1	6
20	Salaries.....	\$29,532	\$900	.....	.....	\$605	\$1,270	\$1,451	\$660	\$12	\$3,274
21	Women—										
22	Number.....	7	.....	.....	.....	.....	2	.....	.....	.....	.....
23	Salaries.....	\$1,731	.....	.....	.....	.....	\$450	.....	.....	.....	.....
24	Wage-earners, including pieceworkers, and total wages:										
25	Greatest number employed at any one time during the year.....	4,228	75	13	2	62	32	64	30	10	252
26	Least number employed at any one time during the year.....	3,586	62	10	2	51	28	46	25	9	101
27	Average number.....	2,652	55	11	1	39	23	39	22	4	171
28	Total wages.....	\$1,493,906	\$33,488	\$6,876	\$500	\$19,783	\$11,067	\$19,606	\$9,521	\$2,813	\$92,161
29	Men 16 years and over—										
30	Average number.....	2,587	53	11	1	39	23	38	22	4	165
31	Wages.....	\$1,476,581	\$32,864	\$6,876	\$500	\$19,783	\$11,067	\$19,446	\$9,521	\$2,813	\$90,499
32	Women 16 years and over—										
33	Average number.....	54	1	.....	.....	.....	.....	1	.....	.....	4
34	Wages.....	\$15,750	\$480	.....	.....	.....	.....	\$100	.....	.....	\$1,438
35	Children under 16 years—										
36	Average number.....	11	1	.....	.....	.....	.....	.....	.....	.....	2
37	Wages.....	\$1,575	\$144	.....	.....	.....	.....	.....	.....	.....	\$224
38	Average number of wage-earners, including pieceworkers, employed during each month:										
39	Men 16 years and over—										
40	January.....	869	50	11	.....	19	16	21	18	.....	88
41	February.....	1,018	51	11	.....	19	19	21	19	.....	88
42	March.....	1,273	47	11	.....	21	19	22	19	.....	120
43	April.....	2,299	53	12	.....	27	22	28	21	.....	166
44	May.....	3,618	57	13	2	48	28	42	28	1	223
45	June.....	3,911	58	13	2	53	30	52	29	6	236
46	July.....	3,954	57	11	2	53	29	55	28	10	227
47	August.....	3,888	58	11	2	54	29	54	28	9	211
48	September.....	3,556	54	11	2	55	27	50	23	9	200
49	October.....	3,323	52	10	2	53	24	45	18	3	177
50	November.....	2,181	49	9	.....	43	17	37	16	1	138
51	December.....	1,174	50	9	.....	23	16	29	17	1	106
52	Women 16 years and over—										
53	January.....	26	1	.....	.....	.....	.....	.....	.....	.....	1
54	February.....	27	1	.....	.....	.....	.....	.....	.....	.....	1
55	March.....	30	1	.....	.....	.....	.....	.....	.....	.....	2
56	April.....	49	1	.....	.....	.....	.....	.....	.....	.....	5
57	May.....	72	1	.....	.....	.....	.....	2	.....	.....	6
58	June.....	83	1	.....	.....	.....	.....	3	.....	.....	6
59	July.....	83	1	.....	.....	.....	.....	3	.....	.....	5
60	August.....	83	1	.....	.....	.....	.....	2	.....	.....	6
61	September.....	70	1	.....	.....	.....	.....	1	.....	.....	6
62	October.....	56	1	.....	.....	.....	.....	.....	.....	.....	4
63	November.....	41	1	.....	.....	.....	.....	.....	.....	.....	4
64	December.....	28	1	.....	.....	.....	.....	1	.....	.....	2
65	Children under 16 years—										
66	January.....	5	1	.....	.....	.....	.....	.....	.....	.....	2
67	February.....	6	1	.....	.....	.....	.....	.....	.....	.....	2
68	March.....	10	1	.....	.....	.....	.....	.....	.....	.....	2
69	April.....	15	1	.....	.....	.....	.....	.....	.....	.....	3
70	May.....	19	1	.....	.....	.....	.....	.....	.....	.....	3
71	June.....	22	3	.....	.....	.....	.....	.....	.....	.....	3
72	July.....	19	2	.....	.....	.....	.....	.....	.....	.....	3
73	August.....	15	1	.....	.....	.....	.....	.....	.....	.....	1
74	September.....	7	1	.....	.....	.....	.....	.....	.....	.....	1
75	October.....	6	.....	.....	.....	.....	.....	.....	.....	.....	1
76	November.....	3	.....	.....	.....	.....	.....	.....	.....	.....	1
77	December.....	3	.....	.....	.....	.....	.....	.....	.....	.....	1
78	Miscellaneous expenses:										
79	Total.....	\$322,069	\$6,355	\$1,521	\$173	\$3,915	\$4,789	\$6,213	\$2,371	\$1,387	\$25,956
80	Rent of works.....	\$42,394	\$1,242	\$120	\$90	\$1,338	\$2,370	\$726	\$283	\$102	\$2,444
81	Taxes.....	\$32,035	\$790	\$181	\$13	\$346	\$324	\$579	\$199	\$104	\$1,938
82	Rent of offices, interest, insurance, and all sundry expenses not hitherto included.....	\$244,925	\$4,323	\$1,220	\$70	\$2,231	\$2,095	\$4,908	\$1,889	\$1,181	\$21,574
83	Contract work.....	\$2,708	.....	.....	.....	.....	.....	.....	.....	.....	.....
84	Materials used:										
85	Aggregate cost.....	\$25,256,612	\$341,544	\$67,462	\$7,089	\$233,921	\$100,528	\$233,059	\$84,961	\$36,244	\$1,508,026
86	In making butter—										
87	Total cost.....	\$893,203	\$1,836	.....	\$1,250	\$5,438	\$17,033	\$10,454	.....	\$2,846	\$18,678
88	Milk bought or received from patrons—										
89	Pounds.....	104,291,298	184,248	.....	.....	519,420	1,881,800	.....	.....	.....	1,996,512
90	Cost.....	\$824,592	\$1,408	.....	.....	\$4,988	\$16,353	.....	.....	.....	\$16,783
91	Gathered cream—										
92	Pounds.....	524,198	6,300	.....	24,000	.....	.....	264,064	.....	64,000	.....
93	Cost.....	\$21,000	\$308	.....	\$1,200	.....	.....	\$10,086	.....	\$2,816	.....
94	Tubs, boxes, color, salt, etc.....	\$47,611	\$60	.....	\$50	\$450	\$680	\$368	.....	\$30	\$1,895

¹Includes establishments distributed as follows: Connecticut, 1; Delaware, 1; Massachusetts, 2; South Dakota, 1; Virginia, 1; West Virginia, 2.

BUTTER, CHEESE, AND CONDENSED MILK.

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SUMMARY, BY STATES: 1905.

Minnesota.	Missouri.	Nebraska.	New Hampshire.	New York.	North Dakota.	Ohio.	Oregon.	Pennsylvania.	Utah.	Vermont.	Washington.	Wisconsin.	All other states. ¹	
50	17	4	3	1,108	4	274	31	120	10	48	10	1,454	8	1
\$113,231	\$25,868	\$8,375	\$4,250	\$2,350,004	\$5,500	\$365,765	\$52,400	\$220,372	\$17,650	\$127,508	\$30,004	\$2,070,613	\$15,415	2
\$4,805	\$2,165	\$320	\$250	\$125,262	\$230	\$22,415	\$5,895	\$25,845	\$925	\$4,535	\$1,370	\$108,735	\$825	3
\$52,250	\$12,800	\$3,100	\$2,300	\$1,000,131	\$3,320	\$100,242	\$18,893	\$98,925	\$4,975	\$53,225	\$9,750	\$1,110,716	\$5,100	4
\$37,085	\$0,750	\$1,505	\$1,500	\$718,416	\$1,070	\$120,548	\$23,431	\$71,000	\$8,700	\$34,480	\$13,562	\$541,630	\$2,340	5
\$10,031	\$4,153	\$1,450	\$200	\$410,085		\$53,500	\$4,280	\$32,993	\$3,050	\$35,208	\$5,382	\$300,523	\$7,150	6
32	10	4	2	1,240	1	182	10	120	4	21	11	1,252	7	7
14	2			23	1	0	4	4		12	6	55		8
\$1,801	\$188			\$14,005	\$84	\$07	\$400	\$120		\$3,428	\$400	\$2,840		9
1							3					29		10
\$700							\$249					\$622		11
13	2			23	1	6	1	4		12	0	26		12
\$1,161	\$188			\$14,005	\$84	\$07	\$250	\$120		\$3,428	\$400	\$2,218		13
13	2			21	1	6	1	4		12	6	23		14
\$1,161	\$188			\$13,535	\$84	\$07	\$250	\$120		\$3,428	\$400	\$2,007		15
				2								3		16
				\$1,100								\$121		17
68	15	4	7	1,463	3	359	43	150	18	04	14	1,401	13	18
00	12	4	0	1,228	3	318	37	128	8	58	14	1,277	9	19
43	12	2	2	805	2	210	30	84	11	43	0	938	0	20
\$26,284	\$4,475	\$900	\$071	\$480,240	\$090	\$130,380	\$17,587	\$43,770	\$5,788	\$22,073	\$6,510	\$548,373	\$2,835	21
43	11	2	2	800	2	208	30	83	10	41	8	917	5	22
\$26,284	\$4,415	\$900	\$071	\$478,000	\$090	\$120,425	\$17,587	\$43,698	\$5,688	\$22,573	\$6,300	\$543,017	\$2,735	23
				20		2		1	1	2		16		24
				\$8,171		\$904		\$178	\$100	\$400		\$3,850		25
	1										1	5	1	26
	\$60										\$150	\$807	\$100	27
23	0	1	3	218		50	22	15	8	24	6	263	4	28
24	0	1	3	342		60	22	17	9	24	7	208	4	29
25	10	1	3	472		75	22	10	8	24	8	343	4	30
37	10	1	3	872		174	33	54	10	30	10	720	0	31
55	12	3	4	1,200	4	313	37	120	10	66	12	1,201	0	32
62	14	3	2	1,370	4	320	38	141	11	50	13	1,372	0	33
60	13	3	2	1,380	4	340	41	148	12	60	12	1,386	0	34
63	12	3	2	1,352	4	341	38	147	12	58	10	1,364	0	35
50	12	3	2	1,172	4	315	38	135	12	52	8	1,310	0	36
50	11	2		1,007	3	281	20	110	12	47	4	1,283	4	37
35	10	2		590	1	141	20	50	6	35	4	955	4	38
26	10	1		273		68	20	10	7	23	2	470	4	39
				19						2		3		40
				10						2		4		41
				10						2		6		42
				20		1				2		14		43
				33		4		3		2		21		44
				35		4		3		3		28		45
				34		4		2	3	3		28		46
				34		4		2	3	3		28		47
				27		4		1	3	3		24		48
				26		1		1	3	2		18		49
				22		1						13		50
				18		1						5		51
	1											1		52
	1											2		53
	1											2		54
	1											2		55
	1											6		56
	1											10		57
	1											11		58
	1											9		59
	1											8		60
	1											5		61
	1											3		62
	1											1		63
\$5,587	\$1,011	\$125	\$50	\$121,201	\$301	\$27,020	\$3,274	\$10,188	\$1,052	\$4,452	\$1,004	\$91,633	\$1,185	64
\$070	\$130	\$72		\$12,000	\$50	\$5,230	\$170	\$903	\$340	\$000	\$00	\$12,815	\$105	65
\$538	\$135	\$20		\$11,801	\$15	\$2,583	\$504	\$1,405	\$131	\$507	\$253	\$9,444	\$150	66
\$4,373	\$740	\$33	\$35	\$94,134	\$230	\$10,216	\$2,504	\$8,072	\$1,181	\$3,225	\$1,201	\$90,374	\$930	67
				\$2,000				\$18						68
\$244,805	\$51,045	\$14,237	\$20,202	\$10,027,000	\$3,030	\$1,420,130	\$204,940	\$875,445	\$40,850	\$380,500	\$80,092	\$9,238,872	\$22,050	69
\$108				\$908,533		\$83,325	\$7,104	\$2,881	\$0,008	\$0,008	\$4,120	\$52,074	\$857	70
				77,153,800		12,755,536	770,300	297,000	850,902	1,114,955	330,000	6,320,705	100,805	71
				\$926,145		\$70,778	\$7,024	\$2,821	\$5,838	\$9,553	\$2,070	\$50,014	\$827	72
2,880				120,000					12,687	082	20,100	185		73
\$100				\$4,750					\$030	\$51	\$1,050	\$0		74
\$8				\$37,638		\$3,547	\$170	\$00	\$140	\$334	\$100	\$2,051	\$30	75

TABLE 11.—CHEESE—DETAILED

	United States.	California.	Colorado.	Idaho.	Illinois.	Indiana.	Iowa.	Kansas.	Maine.	Michigan.	
Materials used--Continued.											
Aggregate cost--Continued.											
In making cheese--											
76	Total cost.....	\$24,048,203	\$333,391	\$66,196	\$5,654	\$223,845	\$81,142	\$216,429	\$83,072	\$33,123	\$1,467,414
77	Milk bought or received from patrons--										
78	Pounds.....	2,951,390,154	33,254,215	7,356,277	674,000	25,760,210	9,534,152	27,970,953	11,385,334	3,502,500	165,825,871
	Cost.....	\$22,930,559	\$322,234	\$62,013	\$5,160	\$201,661	\$78,156	\$205,678	\$79,346	\$31,992	\$1,405,506
	Skimmed milk bought or received from patrons--										
79	Pounds.....	25,396,739			7,896,655						
80	Cost.....	\$41,931			\$11,740						
81	Boxes, salt, etc.....	\$1,075,713	\$11,159	\$4,183	\$494	\$10,444	\$2,986	\$10,751	\$3,726	\$1,131	\$61,908
In making condensed milk--											
82	Total cost.....	\$82					\$82				
83	Milk--										
84	Pounds.....	3,800				3,800					
	Cost.....	\$34				\$34					
	Sugar--										
85	Pounds.....	600				600					
86	Cost.....	\$30				\$30					
87	Cans, labels, etc.....	\$18				\$18					
88	Fuel.....	\$288,062	\$5,060	\$1,126	\$180	\$3,807	\$2,049	\$4,532	\$1,696	\$226	\$17,059
89	Rent of power and heat.....	\$495									\$25
90	Mill supplies.....	\$10,950	\$225	\$65	\$5	\$135	\$120	\$764	\$69	\$6	\$1,105
91	All other materials.....										
92	Freight.....	\$15,617	\$430	\$75		\$996	\$102	\$880	\$124	\$43	\$3,745
Products:											
93	Aggregate value.....	\$29,138,100	\$421,202	\$91,305	\$8,948	\$292,994	\$128,496	\$291,199	\$105,048	\$43,005	\$1,765,163
Butter and its by-products--											
94	Total value.....	\$1,075,341	\$2,480		\$1,508	\$5,229	\$18,469	\$12,597		\$3,520	\$20,875
95	Packed solid--										
96	Pounds.....	4,164,754	2,000		6,857	22,071	74,688	54,896		16,000	101,850
	Value.....	\$888,664	\$400		\$1,508	\$5,229	\$17,869	\$12,597		\$3,520	\$20,783
97	Prints or rolls--										
98	Pounds.....	498,835	7,677				3,000				
	Value.....	\$121,986	\$1,900				\$600				
99	Cream sold--										
100	Pounds.....	212,050									
	Value.....	\$24,085									
	Skimmed milk sold fed, or returned to patrons--										
101	Pounds.....	7,633,880	205,000								91,800
102	Value.....	\$8,403	\$180								\$92
	Casein dried from skimmed milk--										
103	Pounds.....	621,250									
104	Value.....	\$25,728									
105	All other butter factory products.....	\$7,475									
Cheese and its by-products--											
106	Total value.....	\$28,062,649	\$418,722	\$91,305	\$7,440	\$287,765	\$109,917	\$278,602	\$105,048	\$39,485	\$1,744,288
	Standard factory (cheddars or flats)--										
107	Pounds.....	233,758,565	3,299,827	736,673	67,400	1,169,300	902,678	2,779,498	1,120,863	361,850	16,452,577
108	Value.....	\$21,464,752	\$385,774	\$87,674	\$7,440	\$111,450	\$99,052	\$277,006	\$104,914	\$39,485	\$1,676,280
109	Skimmed cheese, any size or form--										
110	Pounds.....	2,386,957				653,502					
	Value.....	\$114,908				\$28,013					
111	Other kinds--										
112	Pounds.....	71,587,474	174,000			1,456,563	63,625				362,279
	Value.....	\$6,258,362	\$26,375			\$145,361	\$7,037				\$41,796
113	Whey sold--										
114	Pounds.....	78,206,900	837,175	500,000		899,800	692,500	522,781	154,000		30,925,913
	Value.....	\$43,846	\$393	\$250		\$450	\$230	\$57	\$77		\$13,838
115	Whey otherwise used--										
116	Pounds.....	85,061,192	8,039,779	1,262,900		1,653,500	1,708,393	25,000			14,493,180
117	Value.....	\$66,356	\$4,337	\$901		\$3,209	\$1,539	\$25			\$11,563
	All other cheese factory products.....	\$114,395	\$1,843	\$2,480		\$2,491	\$389	\$32			\$811
Condensed milk and its by-products--											
118	Total value.....	\$60					\$60				
	Condensed milk, sweetened--										
119	Pounds.....										
120	Value.....										
	Condensed milk, unsweetened--										
121	Pounds.....	1,000					1,000				
122	Value.....	\$60					\$60				
123	All other condensed-milk products.....										
124	All other products not classified.....	\$50					\$50				
Equipment:											
125	Cream separators, number.....	353	5	2	1	4	11	1			18
126	Branch factories, number.....	143				11	2	1			23
127	Separating or skimming stations, number.....	9					1				
Power:											
128	Number of establishments reporting.....	1,218	16	5	2	22	13	36	17	2	62
129	Total horsepower.....	10,446	162	96	4	184	213	316	167	12	695
	Owned--										
	Engines--										
	Steam--										
130	Number.....	1,183	17	5	1	20	14	37	16	2	60
131	Horsepower.....	10,006	137	96	3	159	197	308	163	12	586
	Gas or gasoline--										
132	Number.....	66	1		1	2	1	1			3
133	Horsepower.....	218	15		1	5	16	6			9
	Water wheels--										
134	Number.....	3									
135	Horsepower.....	64							1		
	Water motors--								4		
136	Number.....	1						1			
137	Horsepower.....	2						2			
	Electric motors--										
138	Number.....	7									
139	Horsepower.....	80									
140	Other power, horsepower.....	56				20					
Rented--											
	Electric motors--										
141	Number.....	1									
142	Horsepower.....	20									
143	Other kind, horsepower.....										
144	Furnished to other establishments, horsepower.....	12									

BUTTER, CHEESE, AND CONDENSED MILK.

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SUMMARY, BY STATES: 1905—Continued.

Minne- sota.	Missouri.	Ne- braska.	New Hamp- shire.	New York.	North Dakota.	Ohio.	Oregon.	Pennsyl- vania.	Utah.	Vermont.	Washing- ton.	Wisconsin.	All other states.	
\$230,048	\$51,124	\$13,741	\$20,101	\$9,256,602	\$3,832	\$1,310,582	\$105,268	\$801,264	\$41,893	\$306,314	\$74,548	\$0,073,813	\$20,715	76
30,680,826	6,887,314	1,601,200	2,102,000	1,160,528,260	528,970	172,027,972	21,643,660	105,382,584	5,425,265	42,573,871	8,100,460	1,100,219,751	2,354,591	77
\$228,526	\$48,232	\$12,951	\$19,123	\$3,818,797	\$4,633	\$1,263,315	\$189,262	\$802,347	\$40,599	\$351,971	\$72,394	\$3,608,248	\$19,415	78
				4,073,126		2,404,000		10,172,058					250,000	70
				\$7,067		\$2,404		\$20,345					\$375	80
\$10,522	\$2,892	\$790	\$978	\$430,828	\$100	\$53,863	\$0,006	\$38,572	\$1,294	\$14,343	\$2,154	\$405,565	\$925	81
														82
														83
														84
														85
\$5,109	\$791	\$482	\$101	\$96,265	\$88	\$24,280	\$2,394	\$8,407	\$1,059	\$3,918	\$1,305	\$107,010	\$458	86
\$354	\$30	\$11		\$450		\$1,430	\$84	\$473	\$55	\$85	\$20	\$2,795	\$20	87
\$246		\$3		\$3,080							\$60			88
				\$2,577	\$10	\$510		\$2,420	\$244	\$284	\$9	\$3,210		89
\$300,347	\$67,445	\$17,166	\$22,564	\$11,403,710	\$5,571	\$1,755,913	\$253,675	\$1,010,160	\$62,831	\$443,806	\$90,620	\$10,500,532	\$32,392	90
\$150				\$813,473		\$100,000	\$8,407	\$3,105	\$7,077	\$10,127	\$5,054	\$59,963	\$1,348	91
720				3,042,036		408,104		13,500	34,636	41,000	3,800	281,696		92
\$150				\$956,612		\$90,439		\$9,105	\$7,100	\$9,020	\$1,064	\$59,208		93
				382,127		42,010	35,018		3,625	4,709	15,300		5,300	94
				\$95,064		\$9,264	\$7,021		\$877	\$1,022	\$3,950		\$1,348	95
				200,020		11,140								96
				\$22,217		\$898								97
				6,163,621		158,000	480,000					535,450		98
				\$6,702		\$158	\$576					\$605		99
				621,250										100
				\$25,728										101
				\$7,150		\$240				\$85				102
\$300,107	\$67,445	\$17,166	\$22,564	\$10,500,246	\$5,571	\$1,654,944	\$245,178	\$1,016,054	\$54,854	\$433,679	\$91,560	\$10,440,500	\$31,044	103
2,963,024	687,137	158,470	207,140	100,700,034	51,894	12,001,860	2,103,582	10,466,885	541,455	4,271,160	802,258	70,754,662	198,330	104
\$294,043	\$60,703	\$17,160	\$22,564	\$8,770,645	\$5,571	\$1,200,208	\$230,510	\$935,081	\$54,520	\$416,780	\$90,183	\$0,540,003	\$22,680	105
				892,748		255,400		521,400			8,000	11,348	44,550	106
				\$45,972		\$11,783		\$20,050			\$640	\$454	\$1,990	107
62,071				27,503,528		3,724,848	41,525	358,083		72,000		37,602,052	76,000	108
\$7,778				\$1,711,019		\$404,350	\$4,755	\$38,158		\$10,800		\$3,854,685	\$6,278	109
	374,000			22,201,343		7,878,883	401,000	5,147,000		150,000		7,432,505		110
	\$187			\$13,407		\$3,974	\$100	\$5,522		\$75		\$5,280		111
6,450,404	524,342			18,087,770		0,738,204	1,850,677	13,610,333	640,700	5,840,066	240,000	2,071,035		112
\$3,681	\$405			\$13,403		\$3,884	\$804	\$11,237	\$325	\$5,404	\$240	\$5,330		113
\$3,605				\$36,000		\$30,745				\$680	\$428	\$34,802	\$90	114
														115
														116
														117
														118
														119
														120
														121
														122
														123
														124
2		1		174		33	3	3	4	5	3	83		125
				36		21		8		3		38		126
				5		2						1		127
31	7	3	2	450		107	12	37	5	18	4	306	2	128
361	44	30	20	3,670		1,143	74	314	37	182	32	2,782	12	129
														130
30	7	3	3	400		104	10	37	5	18	4	328	2	131
321	44	30	20	3,512		1,121	69	308	37	170	32	2,063	12	132
				8		7	2	1		1		38		133
				30		22	5	0		12		61		134
1				1										135
40				20										136
														137
														138
				7										139
				80										140
				8										141
														142
				1										143
				20										144
						12								145

TABLE 12.—CONDENSED MILK—DETAILED

		United States.	California.
1	Number of establishments.....	81	6
2	Capital:		
3	Total.....	\$10,942,955	\$473,729
4	Land.....	\$433,225	\$5,700
5	Buildings.....	\$2,881,980	\$38,905
6	Machinery, tools, and implements.....	\$3,512,416	\$127,889
7	Cash and sundries.....	\$4,115,334	\$301,145
8	Proprietors and firm members.....	15	
9	Salaried officials, clerks, etc.:		
10	Total number.....	313	11
11	Total salaries.....	\$363,332	\$11,585
12	Officers of corporations—		
13	Number.....	29	2
14	Salaries.....	\$72,040	\$2,400
15	General superintendents, managers, clerks, etc.—		
16	Total number.....	284	9
17	Total salaries.....	\$291,292	\$9,185
18	Men—		
19	Number.....	235	6
20	Salaries.....	\$266,189	\$7,905
21	Women—		
22	Number.....	40	3
23	Salaries.....	\$25,103	\$1,220
24	Wage-earners, including pieceworkers, and total wages:		
25	Greatest number employed at any one time during the year.....	4,178	148
26	Least number employed at any one time during the year.....	2,713	70
27	Average number.....	3,375	102
28	Total wages.....	\$1,513,159	\$59,102
29	Men 16 years and over—		
30	Average number.....	2,172	77
31	Wages.....	\$1,168,004	\$49,927
32	Women 16 years and over—		
33	Average number.....	1,133	25
34	Wages.....	\$332,647	\$9,175
35	Children under 16 years—		
36	Average number.....	70	
37	Wages.....	\$12,508	
38	Average number of wage-earners, including pieceworkers, employed during each month:		
39	Men 16 years and over—		
40	January.....	1,972	67
41	February.....	1,998	57
42	March.....	2,120	86
43	April.....	2,213	89
44	May.....	2,288	86
45	June.....	2,408	82
46	July.....	2,379	79
47	August.....	2,296	82
48	September.....	2,181	78
49	October.....	2,145	70
50	November.....	2,053	70
51	December.....	2,011	78
52	Women 16 years and over—		
53	January.....	1,051	17
54	February.....	1,041	15
55	March.....	1,121	23
56	April.....	1,195	43
57	May.....	1,287	46
58	June.....	1,285	47
59	July.....	1,216	33
60	August.....	1,160	20
61	September.....	1,138	19
62	October.....	1,087	15
63	November.....	1,067	13
64	December.....	1,008	19
65	Children under 16 years—		
66	January.....	44	
67	February.....	45	
68	March.....	50	
69	April.....	55	
70	May.....	68	
71	June.....	101	
72	July.....	117	
73	August.....	108	
74	September.....	71	
75	October.....	66	
76	November.....	59	
77	December.....	56	
78	Miscellaneous expenses:		
79	Total.....	\$940,959	\$23,727
80	Rent of works.....	\$4,366	\$350
81	Taxes.....	\$44,890	\$1,884
82	Rent of offices, insurance, interest, and all sundry expenses not hitherto included.....	\$891,303	\$21,493
83	Contract work.....	\$400	
84	Materials used:		
85	Aggregate cost.....	\$16,372,954	\$357,819
86	In making butter—		
87	Total cost.....	\$330,134	\$19,009
88	Milk bought or received from patrons—		
89	Pounds.....	33,135,234	1,708,980
90	Cost.....	\$284,696	\$14,890
91	Gathered cream—		
92	Pounds.....	527,074	62,656
93	Cost.....	\$30,841	\$3,251
94	Tubs, boxes, color, salt, etc.....	\$14,597	\$868
95	In making cheese—		
96	Total cost.....	\$68,412	
97	Milk bought or received from patrons—		
98	Pounds.....	7,299,258	
99	Cost.....	\$59,277	
100	Skimmed milk bought or received from patrons—		
101	Pounds.....	4,236,213	
102	Cost.....	\$6,122	
103	Boxes, salt, etc.....	\$3,013	

Includes establishments distributed as follows: Colorado, 1; Indiana, 2; Iowa, 1; Maine, 1; New Hampshire, 1; New Jersey, 2; Oregon, 2; Utah, 1; Vermont, 1

BUTTER, CHEESE, AND CONDENSED MILK.

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SUMMARY, BY STATES: 1905.

Illinois.	Michigan.	New York.	Ohio.	Pennsylvania.	Washington.	Wisconsin.	All other states. ¹	
15	6	25	3	6	4	4	12	1
\$3,702,410	\$530,867	\$3,563,419	\$213,699	\$802,720	\$345,720	\$105,919	\$1,108,463	2
\$142,410	\$21,450	\$148,375	\$0,150	\$50,000	\$8,200	\$15,000	\$23,040	3
\$1,002,266	\$72,053	\$1,186,166	\$87,100	\$153,500	\$37,500	\$62,000	\$241,500	4
\$1,004,698	\$179,897	\$1,200,351	\$73,084	\$192,591	\$150,500	\$72,000	\$390,000	5
\$1,493,136	\$202,567	\$968,527	\$43,465	\$397,029	\$140,526	\$46,019	\$462,414	6
2	3	2	2	2	1	1	3	7
70	17	83	5	40	24	16	38	8
\$97,087	\$13,617	\$117,276	\$3,720	\$30,225	\$20,750	\$15,800	\$37,072	9
6	1	5	5	5	4	2	4	10
\$17,700	\$1,800	\$19,000	-----	\$8,000	\$12,800	\$4,280	\$6,000	11
73	10	78	5	35	20	14	34	12
\$79,987	\$11,817	\$98,270	\$3,720	\$28,165	\$16,050	\$11,520	\$31,072	13
58	14	60	5	33	13	13	24	14
\$73,103	\$11,130	\$92,050	\$3,720	\$20,705	\$13,150	\$10,800	\$26,000	15
15	2	9	-----	2	7	1	10	16
\$0,884	\$0,87	\$5,320	-----	\$1,400	\$3,800	\$720	\$5,02	17
1,349	320	1,240	71	264	210	140	427	18
1,004	235	820	43	135	146	97	243	19
1,189	248	1,010	37	188	159	108	334	20
\$514,453	\$102,023	\$475,030	\$14,155	\$70,093	\$71,382	\$60,089	\$145,332	21
607	130	602	23	120	118	87	219	22
\$307,082	\$73,563	\$384,320	\$10,940	\$55,068	\$58,580	\$54,002	\$113,013	23
451	100	313	9	60	35	18	107	24
\$138,131	\$20,360	\$90,080	\$2,506	\$14,025	\$11,073	\$5,334	\$30,494	25
41	-----	5	5	2	6	3	8	26
\$8,340	-----	\$321	\$049	\$100	\$1,120	\$753	\$1,225	27
674	132	618	7	96	115	80	177	28
703	132	618	7	97	116	83	185	29
712	144	652	7	104	121	84	210	30
731	161	681	7	126	132	85	211	31
717	153	711	7	143	151	88	232	32
733	142	704	27	167	154	95	244	33
714	143	700	32	165	144	95	247	34
696	136	722	30	144	133	90	254	35
687	135	700	38	110	97	88	230	36
680	131	730	35	94	92	85	222	37
653	135	690	36	93	84	81	212	38
658	134	649	35	92	77	84	204	39
450	80	267	-----	60	35	15	82	40
452	101	286	-----	54	35	16	82	41
453	110	313	-----	67	30	10	103	42
467	118	329	-----	78	38	18	104	43
404	134	330	-----	75	42	18	112	44
403	130	358	12	83	41	10	132	45
451	114	353	10	78	40	10	122	46
445	110	341	10	62	38	10	100	47
448	109	310	18	77	31	10	107	48
443	90	296	17	57	30	19	111	49
440	90	279	15	56	29	19	111	50
421	98	258	14	45	25	19	109	51
20	-----	5	-----	-----	5	2	6	52
20	-----	5	-----	-----	6	2	6	53
20	-----	5	-----	-----	6	2	8	54
33	-----	5	-----	-----	7	2	8	55
40	-----	4	-----	6	8	2	8	56
61	-----	5	10	6	8	2	9	57
65	-----	5	14	6	7	8	12	58
60	-----	5	13	6	7	8	9	59
44	-----	5	7	-----	5	2	8	60
30	-----	6	6	-----	5	2	8	61
30	-----	5	-----	-----	4	2	7	62
33	-----	5	5	-----	4	2	7	63
\$402,074	\$10,007	\$257,002	\$0,374	\$04,640	\$30,114	\$16,778	\$112,063	64
\$300	-----	\$2,453	-----	-----	-----	-----	\$1,200	65
\$13,700	\$4,225	\$15,080	\$458	\$1,080	\$983	\$1,308	\$5,563	66
\$388,005	\$14,872	\$238,050	\$5,010	\$63,500	\$38,131	\$15,070	\$105,300	67
-----	-----	-----	-----	-----	-----	\$400	-----	68
\$5,124,208	\$1,505,341	\$5,800,286	\$103,300	\$800,363	\$543,430	\$605,407	\$1,403,637	69
\$07,130	\$18,097	\$02,121	\$0,082	\$45,825	-----	\$45,323	\$30,001	70
4,708,308	1,435,400	10,523,702	1,080,000	4,518,000	-----	5,730,584	3,852,170	71
\$47,877	\$15,827	\$78,404	\$8,712	\$45,175	-----	\$40,100	\$27,051	72
208,244	-----	106,174	-----	-----	-----	-----	-----	73
\$16,704	-----	\$10,887	-----	-----	-----	-----	-----	74
\$2,550	\$2,810	\$2,830	\$370	\$050	-----	\$2,103	\$2,350	75
\$14,117	-----	\$40,345	-----	-----	-----	-----	\$4,050	76
987,400	-----	5,711,858	-----	-----	-----	-----	600,000	77
\$8,000	-----	\$40,027	-----	-----	-----	-----	\$4,050	78
3,540,000	-----	680,013	-----	-----	-----	-----	-----	79
\$5,324	-----	\$708	-----	-----	-----	-----	-----	80
\$703	-----	\$1,020	-----	-----	-----	-----	\$300	81

TABLE 12.—CONDENSED MILK—DETAILED

		United States.	California.
	Material used—Continued.		
	Aggregate cost—Continued.		
	In making condensed milk—		
82	Total cost.....	\$15,460,631	\$320,183
	Milk—		
83	Pounds.....	711,965,913	17,350,384
84	Cost.....	\$8,325,361	\$168,218
	Sugar—		
85	Pounds.....	67,707,741	812,026
86	Cost.....	\$1,910,605	\$43,152
87	Cans, labels, etc.....	\$1,824,665	\$108,813
88	Fuel.....	\$401,985	\$11,459
89	Rent of power and heat.....	\$546	
90	Mill supplies.....	\$38,197	\$2,610
91	All other materials.....		
92	Freight.....	\$73,049	\$4,558
	Products:		
93	Aggregate value.....	\$20,523,690	\$507,743
	Butter and its by-products—		
94	Total value.....	\$377,712	\$23,010
	Packed solid—		
95	Pounds.....	1,096,962	
96	Value.....	\$231,368	
	Prints or rolls—		
97	Pounds.....	470,748	93,345
98	Value.....	\$111,844	\$22,860
	Cream sold—		
99	Pounds.....	298,117	
100	Value.....	\$19,542	
	Skimmed milk sold, fed, or returned to patrons—		
101	Pounds.....	2,560,823	150,000
102	Value.....	\$2,561	\$150
	Casein dried from skimmed milk—		
103	Pounds.....	240,185	
104	Value.....	\$12,002	
105	All other butter factory products.....	\$395	
	Cheese and its by-products—		
106	Total value.....	\$77,969	
	Standard factory (cheddars or Hats)—		
107	Pounds.....	713,623	
108	Value.....	\$66,361	
	Skimmed cheese, any size or form—		
109	Pounds.....	446,008	
110	Value.....	\$11,608	
	Other kinds—		
111	Pounds.....		
112	Value.....		
	Whey sold—		
113	Pounds.....		
114	Value.....		
	Whey otherwise used—		
115	Pounds.....		
116	Value.....		
117	All other cheese factory products.....		
	Condensed milk and its by-products—		
118	Total value.....	\$20,068,009	\$484,733
	Condensed milk, sweetened—		
119	Pounds.....	197,887,310	551,320
120	Value.....	\$13,452,336	\$38,106
	Condensed milk, unsweetened—		
121	Pounds.....	105,357,091	7,071,791
122	Value.....	\$6,469,325	\$434,627
123	All other condens'd-milk factory products.....	\$146,348	\$12,000
124	All other products, not classified.....		
	Equipment:		
125	Cream separators, number.....	73	9
126	Branch factories, number.....	9	
127	Separating or skimming stations, number.....	9	
	Power:		
128	Number of establishments reporting.....	81	6
129	Total horsepower.....	6,403	173
	Owned—		
	Engines—		
	Steam—		
130	Number.....	136	8
131	Horsepower.....	5,391	157
	Gas or gasoline—		
132	Number.....	5	1
133	Horsepower.....	90	12
	Water wheels—		
134	Number.....	7	
135	Horsepower.....	462	
	Water motors—		
136	Number.....	2	
137	Horsepower.....	6	
	Electric motors—		
138	Number.....	130	2
139	Horsepower.....	447	4
140	Other power, horsepower.....		
	Rented—		
	Electric motors—		
141	Number.....	2	
142	Horsepower.....	7	
143	Other kind, horsepower.....		
144	Furnished to other establishments, horsepower.....	2	

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Illinois.	Michigan.	New York.	Ohio.	Pennsylvania.	Washington.	Wisconsin.	All other states.	
\$4,870,238	\$1,438,831	\$5,511,419	\$90,282	\$780,002	\$527,147	\$601,207	\$1,312,202	82
212,684,003	64,105,873	250,810,683	4,630,860	43,720,850	26,818,121	27,785,009	63,058,112	83
\$2,530,020	\$685,125	\$1,000,005	\$58,583	\$478,522	\$338,120	\$300,800	\$733,308	84
16,825,039	8,060,288	28,521,023	40,000	4,648,870		4,001,933	4,790,753	85
\$841,640	\$364,635	\$1,395,480	\$2,000	\$222,107		\$100,045	\$245,546	86
\$1,481,678	\$480,071	\$1,115,334	\$20,669	\$70,373	\$180,027	\$94,422	\$333,348	87
\$137,030	\$31,143	\$120,264	\$3,003	\$15,117	\$14,227	\$12,580	\$40,356	88
		\$100			\$340		\$100	89
\$7,830	\$952	\$13,100	\$90	\$8,138	\$905	\$1,136	\$3,637	90
\$17,940	\$10,078	\$13,937		\$11,281	\$724	\$2,101	\$6,331	91
\$6,601,111	\$1,074,427	\$6,808,440	\$148,903	\$1,257,500	\$738,088	\$843,057	\$1,702,843	92
\$82,231	\$12,033	\$100,880	\$0,000	\$53,400		\$54,105	\$33,144	93
286,087	10,400	477,003	40,500	5,000		250,072		94
\$65,244	\$3,933	\$67,720	\$0,000	\$1,400		\$53,165		95
	40,000	1,200		200,000			136,203	96
	\$8,000	\$240		\$50,000			\$30,744	97
00,000	1,667	100,414				7,500	29,536	98
\$4,500	\$100	\$11,003				\$940	\$2,400	99
00,000		320,823		2,000,000				100
\$90		\$321		\$2,000				101
240,185								102
\$12,002								103
\$395								104
\$18,736		\$53,833					\$5,400	105
98,740		554,883					60,000	106
\$0,874		\$51,087					\$5,400	107
354,475		91,533						108
\$8,802		\$2,740						109
								110
								111
								112
								113
								114
								115
								116
								117
\$6,560,144	\$1,062,394	\$6,704,727	\$130,003	\$1,204,100	\$738,088	\$780,852	\$1,754,200	118
47,511,291	27,084,725	78,122,450	206,250	19,114,512		10,255,850	14,080,000	119
\$3,410,027	\$1,020,732	\$5,432,211	\$15,075	\$1,170,100		\$727,117	\$1,025,072	120
43,054,721	352,200	23,278,307	1,080,008	513,300	13,841,000	1,124,360	13,830,553	121
\$3,173,217	\$11,002	\$1,231,215	\$123,088	\$23,008	\$738,088	\$62,735	\$670,005	122
	\$30,000	\$41,301		\$4,815			\$58,232	123
								124
13	0	22		0		7	10	125
0	2			1				126
5	1						3	127
15	0	25	3	0	4	4	12	128
1,711	405	2,302	203	550	180	180	480	129
								130
38	0	38	4	0	0	0	18	131
1,440	445	1,814	200	543	175	108	440	132
1		1		1			1	133
15		12		10			35	134
		7	</					

FLOUR AND GRIST MILL PRODUCTS

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FLOUR AND GRIST MILL PRODUCTS.

By EMMONS K. ELLSWORTH.

This report contains a statistical discussion of the flour and grist mill industry of the United States for the census of 1905, which covers the calendar year 1904, with comparisons with previous censuses. An historical sketch and a description of the modern process of making flour will be found in the Census reports of 1880 and 1900.

Section 9 of the act of Congress of March 6, 1902, under which the census of 1905 was taken, provides that the enumeration shall not include the neighborhood industries. The products of the custom grist mills being consumed in the immediate vicinity of the mills, it was considered a neighborhood industry and omitted from the enumeration. All mills that did merchant grinding, however, were reported, although they may also have done exchange or custom grinding.

In order to prepare figures for the census of 1900 comparable with those for 1905, the reports for the 25,258 flour and grist mills reported in 1900 were re-examined, so as to segregate the returns for the merchant mills. It was found that 15,782 of the mills were engaged exclusively in custom grinding. The data for the remaining 9,476 were accordingly retabulated and placed in comparison with the 10,051 mills reported for the census of 1905. These figures are presented in Table 1, which is a comparative summary of the statistics for establishments engaged in merchant milling as returned at the censuses of 1900 and 1905.

TABLE 1.—Comparative summary, with per cent of increase: 1905 and 1900.

	CENSUS.		Per cent of increase.
	1905	1900	
Number of establishments.....	10,051	9,476	6.1
Capital.....	\$205,117,434	\$180,281,330	40.1
Salaried officials, clerks, etc., number.....	7,415	5,522	34.3
Salaries.....	\$7,352,357	\$5,257,001	39.8
Wage-earners, average number.....	30,110	32,226	21.4
Total wages.....	\$10,822,100	\$10,285,103	21.7
Men 10 years and over.....	38,572	31,710	21.6
Women 10 years and over.....	\$10,075,724	\$10,154,827	21.8
Wages.....	450	414	8.7
Children under 16 years.....	\$132,513	\$115,845	14.4
Wages.....	88	93	15.4
Miscellaneous expenses.....	\$13,050	\$14,401	13.7
Cost of materials used.....	\$10,750,711	\$9,501,182	100.0
Value of products.....	\$610,071,101	\$428,110,757	44.8
	\$713,033,305	\$501,300,304	42.2

¹ Decrease.

Table 1 shows that the industry has made a substantial increase in all items excepting the number of

children employed and their wages, each of which shows a slight decrease. The establishments engaged in the industry have increased both in number and in size since 1900. At that time the average capital invested per establishment amounted to \$19,975, and an average of 3.4 wage-earners was employed, to whom the average amount paid in wages was \$1,719. The average cost of materials used was \$45,179, and the value of products \$52,912. At the census of 1905 the average amount invested in capital was \$20,377 for each establishment, a gain of 32.1 per cent over that of 1900. The average number of wage-earners increased to 3.9, and the amount paid in wages to \$1,972. The average cost of materials used in each establishment increased to \$61,683, a gain of 36.5 per cent, and the value of products to \$70,942, a gain of 34.1 per cent.

The number of wage-earners increased 6,884, or 21.4 per cent, and the wages paid \$3,537,033, or 21.7 per cent. Of a total of 39,110 wage-earners employed in 1905, 38,572 or 98.6 per cent were men. The character of the work is such that there is but little employment for women and children. Miscellaneous expenses increased 106 per cent, the largest percentage of increase of any of the items. The cost of material used increased \$191,854,404, or 44.8 per cent during the five years, and the value of products \$211,637,091, or 42.2 per cent.

Table 2 presents statistics for flour and grist mill establishments in 1900, for the merchant and for the custom mills reported at that census, and the percentage which each item forms of the total of the two branches combined.

TABLE 2.—Summary for the United States: 1900.

	Total.	Merchant mills.	Per cent of total.	Custom mills.	Per cent of total.
Number of establishments.....	25,258	9,476	37.5	15,782	62.5
Capital.....	\$218,714,104	\$180,281,330	80.5	\$20,432,774	13.5
Salaried officials, clerks, etc., number.....	5,700	5,522	95.4	208	4.0
Salaries.....	\$5,404,750	\$5,257,001	97.3	\$140,750	2.7
Wage-earners, average number.....	37,073	32,226	80.9	4,847	13.1
Total wages.....	\$17,703,418	\$10,285,103	92.0	\$1,418,255	8.0
Men 10 years and over.....	36,410	31,710	87.1	4,700	12.9
Wages.....	\$17,540,370	\$10,154,827	92.1	\$1,385,543	7.9
Women 10 years and over.....	407	414	83.3	83	10.7
Wages.....	\$142,911	\$115,845	81.1	\$27,066	18.9
Children under 16 years.....	157	93	59.2	64	40.8
Wages.....	\$20,137	\$14,401	72.0	\$5,640	28.0
Miscellaneous expenses.....	\$10,325,588	\$9,501,182	92.0	\$734,406	7.1
Cost of materials used.....	\$475,826,345	\$428,110,757	90.0	\$47,709,588	10.0
Value of products.....	\$560,710,003	\$501,300,304	89.4	\$59,409,699	10.6

In the revision of the figures for 1900 there were omitted, as custom or neighborhood mills, 15,782 establishments out of 25,258, or 62.5 per cent of the total number reported. Notwithstanding this large proportion of establishments the capital invested in the custom mills amounted to only 13.5 per cent of the total. The number of wage-earners was 13.1 per cent, the amount paid for wages 8 per cent, the cost of materials used 10 per cent, and the value of products 10.6 per cent.

These figures give some indication of the effect upon the statistics of the census of 1905 resulting from the omission of the custom mills from the establishments canvassed. In making such deductions, however, the increase in the price of grain and as a consequence in the value of the products must be borne in mind, as well as any tendency in this class of mills to increase or decrease during the five years from 1900 to 1905.

The effect upon the real milling operations or the production of wheat flour by the omission of such mills is less even than these figures indicate. The mills omitted are chiefly the small country gristmills, which grind for farmers in the neighborhood. Of the grain ground by the custom mills in 1900, wheat formed only 17.5 per cent of the total number of bushels of grain used.

The custom mills in 1900 showed an average investment of capital of \$1,865, employed an average of 1 wage-earner to each 3 establishments, and paid an average of \$90 as wages. They used an average of \$3,023 worth of materials, and the average value of products was \$3,759.

Table 3 is a comparative summary of the statistics for the industry for each decennial period from 1850 to 1900, with the percentages of increase for each decade.

TABLE 3.—COMPARATIVE SUMMARY, WITH PER CENT OF INCREASE FOR EACH DECADE: 1850 TO 1900.

	CENSUS.						PER CENT OF INCREASE.				
	1900	1890	1880	1870	1860	1850	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments.....	25,258	18,470	24,338	22,573	13,868	11,891	36.8	24.1	7.8	62.8	16.6
Capital.....	\$218,714,104	\$208,473,500	\$177,361,878	\$151,565,376	\$84,585,004	\$54,415,581	4.9	17.5	17.0	79.2	55.4
Salaried officials, clerks, etc., number.....	5,790	16,078	(¹)	(¹)	(¹)	(²)	164.0	.....	.....	.....	.....
Salaries.....	\$5,404,750	\$5,897,340	(¹)	(¹)	(¹)	(²)	139.3	.....	.....	.....	.....
Wage-earners, average number.....	37,073	47,403	58,407	58,448	27,682	23,310	21.8	18.8	10.1	111.1	18.8
Total wages.....	\$17,703,418	\$18,138,402	\$17,422,316	\$14,577,533	\$8,721,391	\$5,680,164	12.4	4.1	19.5	67.1	53.5
Men 16 years and over.....	36,419	46,889	58,239	57,795	27,626	23,260	122.3	119.5	0.8	109.2	18.8
Wages.....	\$17,540,370	\$18,046,465	(¹)	(¹)	(¹)	(²)	12.8	.....	.....	.....	.....
Women 16 years and over.....	497	308	42	91	56	50	61.4	633.3	153.8	62.5	12.0
Wages.....	\$142,911	\$70,153	(¹)	(¹)	(¹)	(²)	103.7	.....	.....	.....	.....
Children under 16 years.....	157	266	126	562	(¹)	(²)	123.8	63.5	177.6	.....	.....
Wages.....	\$20,137	\$21,784	(¹)	(¹)	(¹)	(²)	17.6	.....	.....	.....	.....
Miscellaneous expenses.....	\$10,325,588	\$13,162,037	(¹)	(¹)	(¹)	(²)	121.6	.....	.....	.....	.....
Cost of materials used.....	\$475,826,345	\$454,152,230	\$441,545,225	\$367,392,122	\$208,497,309	\$113,036,698	9.6	11.7	20.2	76.2	84.5
Value of products.....	\$560,719,063	\$513,971,474	\$505,185,712	\$444,985,143	\$248,580,365	\$136,056,736	9.1	1.7	13.5	79.0	82.7

¹ Decrease.

² Includes proprietors and firm members, with their salaries: number only reported in 1900, but not included in this table.

³ Not reported separately.

⁴ Not reported.

It is impossible to separate the merchant and custom mills reported for censuses prior to 1900, and therefore the figures presented in Table 3 are those of the entire flour and grist mill industry, as published at each census.

The ten years from 1860 to 1870 witnessed the greatest increase shown during any decade. The proportionate increase, however, in the cost of materials and the value of products was greatest in the preceding one. Since 1870 there has been a steady decrease in the number of wage-earners employed, due to the constantly improved methods of manufacturing and of handling grain and manufactured products.

During the decade from 1870 to 1880 there was a slight percentage of increase in all items except the number of wage-earners, which showed a small decrease in the total and a large one in the number of women and children. From 1880 to 1890 there was a considerable decrease in the number of establishments, 5,868 less being reported in 1890 than in 1880, a loss of 24.1 per cent. Notwithstanding this decrease, the amount of capital invested increased \$31,111,622, or 17.5 per cent, and the value of

products \$8,785,762, or 1.7 per cent. The gain in value of products is more noteworthy when it is considered that there was a considerable drop in the price of grain, and consequently in the value of manufactured products in 1890 as compared with prices and values in 1880.

From 1890 to 1900 the number of establishments increased 6,788, a gain of 36.8 per cent. The capital invested increased \$10,240,604, or 4.9 per cent. The number of salaried officials and their salaries show a large decrease, which is due to the difference in methods of reporting these items at the two censuses. In 1890 the number of proprietors and firm members and their salaries were included with salaried officials and in 1900 the number only was reported and is not shown in this table. The number of wage-earners decreased 10,330, or 21.8 per cent; the amount paid for wages decreased \$434,984, or 2.4 per cent; but the value of products increased \$46,747,589, or 9.1 per cent.

Table 4 gives the rank of states and territories in 1900 and 1905 according to number of establishments, capital, wage-earners, wages, and value of products.

TABLE 4.—Rank of states and territories by establishments, capital, wage-earners, wages, and value of products, 1905 and 1900, with the states and territories arranged according to the value of products in 1905.

STATE OR TERRITORY.	RANK ACCORDING TO—									
	Number of establishments.		Capital.		Wage-earners and wages.				Value of products.	
					Average number.		Wages.			
	1905	1900	1905	1900	1905	1900	1905	1900	1905	1900
Minnesota.....	11	13	1	1	1	1	1	1	1	1
New York.....	2	2	2	2	2	3	2	3	2	2
Kansas.....	12	10	7	9	8	8	8	8	3	10
Ohio.....	3	3	4	4	3	2	3	2	4	3
Illinois.....	11	11	6	6	5	6	5	4	5	6
Pennsylvania.....	1	1	3	3	4	5	4	6	0	4
Missouri.....	4	4	5	6	0	7	7	7	7	7
Indiana.....	5	5	8	7	7	4	6	5	8	5
Wisconsin.....	7	9	10	8	12	10	10	10	9	8
Michigan.....	6	6	12	10	10	9	9	9	10	9
Tennessee.....	9	7	14	12	9	11	12	12	11	11
Texas.....	19	22	11	16	13	15	13	15	12	14
California.....	21	24	9	11	15	14	11	11	13	12
Kentucky.....	8	12	13	14	11	12	14	13	14	13
Washington.....	28	31	16	20	18	18	16	17	15	19
Virginia.....	16	8	17	17	14	16	18	18	16	16
Nebraska.....	14	15	15	15	16	15	15	16	17	17
Iowa.....	13	14	18	13	17	13	17	14	18	15
Oklahoma.....	29	36	20	32	22	28	20	29	10	28
Oregon.....	24	25	19	19	25	21	19	19	20	20
Georgia.....	22	26	28	27	21	20	20	26	21	23
Maryland.....	15	17	22	18	19	17	21	20	22	18
North Carolina.....	14	16	27	25	20	19	27	27	23	24
South Dakota.....	25	28	24	24	26	25	23	25	24	20
North Dakota.....	32	33	25	29	27	26	25	24	25	26
West Virginia.....	16	18	23	26	24	27	26	28	26	27
Colorado.....	33	34	26	32	30	26	24	22	27	25
New Jersey.....	17	19	21	21	23	22	22	21	23	23
Massachusetts.....	20	21	29	23	28	23	28	23	20	21
Maine.....	18	20	30	28	31	29	30	31	30	30
Arkansas.....	26	30	31	36	29	24	31	30	31	32
Vermont.....	23	23	33	30	32	30	32	35	32	31
Indian Territory.....	30	38	37	40	34	35	35	38	33	38
New Hampshire.....	30	27	35	35	38	31	37	34	34	33
Utah.....	31	32	34	33	30	32	33	33	35	36
Montana.....	41	41	36	37	40	40	39	36	36	40
Connecticut.....	27	29	32	31	33	30	34	32	37	35
Alabama.....	35	37	43	41	35	33	40	40	38	37
Idaho.....	38	38	38	38	39	39	39	39	39	42
Delaware.....	34	35	39	34	37	34	38	37	40	39
Rhode Island.....	39	39	42	39	43	38	43	41	41	34
Arizona.....	43	42	41	43	44	41	42	44	42	44
South Carolina.....	37	38	45	44	42	36	44	43	43	41
District of Columbia.....	44	43	46	45	41	37	41	42	44	43
Nevada.....	43	42	40	42	47	46	45	49	45	49
New Mexico.....	40	40	47	46	45	42	46	45	46	46
Wyoming.....	42	43	44	47	48	45	47	40	47	48
Florida.....	44	44	48	49	49	47	49	50	48	50
Mississippi.....	43	43	49	50	46	43	48	47	46	45
Louisiana.....	45	45	50	48	50	44	50	48	50	47

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In this and all succeeding tables the statistics of the census of 1900, when used, are the revised figures and represent the merchant mills only. Tables 6 and 13 are comparative summaries of the statistics for 1900 and 1905, and Table 14 is a detailed summary of the industry for 1905. These tables present the statistics for the industry in a comprehensive manner and should be studied in connection with Table 4.

Minnesota ranked first at both censuses in all items, except number of establishments, in which it ranked thirteenth in 1900 and eleventh in 1905. New York ranked second in all items at the census of 1905 and second in all except wage-earners and wages in 1900, at which time it held third rank in these items. One of the greatest advances in rank was that for the state of Kansas. In 1900 this state, holding tenth rank, reported products valued at \$21,328,747; in 1905 the value of products increased to \$42,034,019, and the state advanced to third rank, passing the states of Ohio, Illinois, Pennsylvania, Missouri, Indiana, Wisconsin, and Michigan. In the other items, however, there was no advance at all comparable with that of value of products. In capital the state advanced only from ninth to seventh place, in the number of wage-earners and in the wages paid it remained unchanged in rank, and in number of establishments it dropped from tenth to twelfth place.

Of the other leading states, the changes in relative position are slight. The lack of correspondence between the rank with regard to value of products and that with regard to other items is notable. The first state in value of products, for example, was eleventh in number of establishments, and Pennsylvania ranked in these items sixth and first, respectively.

Table 5 presents the statistics for the milling industry for the census of 1905, by states, arranged in geographic groups.

MANUFACTURES.

TABLE 5.—COMPARATIVE SUMMARY, BY STATES AND

	STATE OR TERRITORY.	Number of estab- lish- ments.	Capital.	WAGE-EARNERS AND WAGES.		Miscellaneous expenses.
				Average number.	Wages.	
1	United States.....	10,051	\$265,117,434	39,110	\$19,822,196	\$19,756,711
2	North Atlantic division.....	2,794	53,850,378	7,185	3,537,656	3,093,189
3	Maine.....	161	1,422,671	234	108,382	57,941
4	New Hampshire.....	72	1,008,936	128	63,454	35,106
5	Vermont.....	109	1,319,735	185	91,464	54,155
6	Massachusetts.....	142	1,881,478	277	154,065	92,989
7	Rhode Island.....	22	389,479	45	23,771	13,357
8	Connecticut.....	86	1,335,822	167	85,874	41,010
9	New York.....	825	24,819,316	3,063	1,553,122	1,726,638
10	New Jersey.....	182	2,907,250	454	210,689	144,522
11	Pennsylvania.....	1,195	18,765,691	2,632	1,246,835	927,480
12	South Atlantic division.....	1,192	15,496,803	3,100	1,132,841	932,813
13	Delaware.....	47	484,171	137	58,425	48,415
14	Maryland.....	202	2,717,258	550	212,332	238,525
15	Virginia.....	365	5,543,101	957	348,681	223,190
16	West Virginia.....	194	2,622,906	400	183,050	116,063
17	North Carolina.....	234	1,990,346	519	100,329	98,822
18	South Carolina.....	29	205,619	60	18,414	7,708
19	Georgia.....	114	1,895,718	404	146,095	197,123
20	Florida.....	7	77,684	13	5,515	2,967
21	North Central division.....	4,378	139,198,885	21,207	11,165,276	11,558,198
22	Ohio.....	604	14,931,065	2,700	1,339,568	962,625
23	Indiana.....	566	11,906,761	2,289	1,091,428	753,605
24	Illinois.....	363	14,128,467	2,410	1,210,865	805,046
25	Michigan.....	405	7,654,270	1,508	766,690	541,168
26	Wisconsin.....	389	10,545,861	1,351	719,682	784,058
27	Minnesota.....	363	34,857,366	4,481	2,650,818	4,471,676
28	Iowa.....	276	5,216,059	770	399,108	322,960
29	Missouri.....	582	14,834,042	2,345	1,090,843	960,217
30	North Dakota.....	56	2,383,673	312	200,439	214,019
31	South Dakota.....	96	2,427,556	347	203,102	204,249
32	Nebraska.....	234	6,496,878	863	468,268	390,587
33	Kansas.....	354	13,816,887	1,831	1,024,465	1,077,391
34	South Central division.....	1,171	27,960,929	4,997	2,124,607	2,311,728
35	Kentucky.....	388	7,342,417	1,373	515,158	609,530
36	Tennessee.....	387	6,927,155	1,595	591,046	488,700
37	Alabama.....	40	371,666	159	53,887	29,716
38	Louisiana.....	3	50,200	4	1,738	2,495
39	Arkansas.....	91	1,352,669	263	103,632	70,058
40	Indian Territory.....	33	880,451	161	78,238	61,599
41	Oklahoma.....	75	3,242,032	456	253,260	239,532
42	Texas.....	154	7,785,339	986	527,652	810,098
43	Western division.....	500	28,347,086	2,540	1,824,774	1,844,294
44	Montana.....	12	991,191	67	57,096	88,552
45	Idaho.....	28	685,397	84	66,864	56,255
46	Wyoming.....	11	222,440	16	11,258	13,240
47	Colorado.....	52	2,325,671	244	202,778	272,570
48	New Mexico.....	13	139,420	29	14,352	6,384
49	Arizona.....	9	404,445	36	24,368	30,739
50	Utah.....	63	1,212,439	150	91,461	58,147
51	Nevada.....	9	411,368	17	16,098	20,333
52	Washington.....	76	6,490,492	613	409,828	466,378
53	Oregon.....	105	3,097,069	395	271,183	235,836
54	California.....	122	11,467,154	889	659,488	595,860
55	Not distributed by states ¹	16	263,353	81	37,042	16,489

¹ The statistics for 16 establishments, 7 in the District of Columbia and 9 in Mississippi, are included in the total, "not distributed by states," in order to avoid the disclosure of individual operations in certain particulars.

FLOUR AND GRIST MILL PRODUCTS.

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TERRITORIES AND GEOGRAPHIC DIVISIONS: 1905.

MATERIALS USED.				PRODUCTS.			
Total cost.	Wheat.		All other materials.	Total value.	Wheat flour.		All other products.
	Bushels.	Cost.			Barrels.	Value.	
\$619,971,161	494,095,083	\$456,306,503	\$163,664,658	\$713,633,305	104,013,278	\$480,258,514	\$232,774,881
100,024,523	47,535,462	48,330,298	52,285,225	116,948,661	10,116,935	50,612,002	65,335,759
3,442,115	136,230	135,156	3,306,959	3,632,882	24,917	147,005	3,784,977
2,348,332	382,785	458,509	1,880,733	2,541,775	76,641	450,148	2,082,627
2,872,445	15,020	15,378	2,857,067	3,206,075	3,020	14,064	3,101,411
4,112,989	37,429	39,984	4,073,005	4,618,313	8,435	40,004	4,671,319
1,059,438	1,070	1,707	1,057,041	1,134,092	330	2,003	1,131,099
1,000,486	6,531	6,304	1,084,182	1,081,774	1,374	7,164	1,074,610
47,372,403	26,030,183	26,508,780	20,863,713	54,546,435	5,078,743	28,177,883	26,308,552
4,521,713	1,711,041	1,717,855	2,803,858	5,468,613	354,231	1,012,982	3,555,631
33,204,512	19,207,373	19,455,445	13,749,007	38,618,702	3,909,229	19,844,069	18,074,633
38,905,219	24,408,071	25,088,843	13,816,376	44,792,504	5,027,004	25,828,714	18,963,790
1,315,404	832,080	818,108	407,208	1,536,004	108,044	865,704	670,810
6,200,083	5,110,510	4,600,024	1,513,350	7,318,212	1,015,052	4,800,634	2,457,578
12,170,029	8,586,439	8,080,548	3,481,081	13,832,200	1,777,169	8,855,726	4,976,573
5,213,205	3,639,288	3,107,056	2,016,140	6,200,261	620,070	3,300,150	2,810,135
5,085,802	3,453,790	3,780,471	2,106,391	6,863,770	713,406	3,816,448	3,047,322
633,294	258,438	270,874	2,353,420	726,222	53,150	202,406	432,732
7,204,804	3,186,008	3,618,164	3,646,040	8,178,926	671,809	3,747,406	4,431,460
112,038			112,038	137,180			137,180
300,243,018	322,783,302	292,708,800	67,444,122	411,477,172	67,910,469	307,274,825	104,202,347
35,020,232	27,610,184	27,308,062	8,258,170	40,855,500	5,628,179	27,850,003	12,908,063
31,342,117	25,156,632	24,308,577	7,033,540	36,473,543	5,181,006	25,282,880	11,190,663
34,929,057	28,380,202	26,637,126	8,292,531	39,802,127	5,054,080	27,610,401	12,272,726
23,414,207	10,092,087	17,047,048	6,367,150	26,512,027	3,001,219	17,155,000	9,350,037
24,756,140	17,806,000	10,781,001	7,074,539	28,362,237	3,744,373	17,611,009	10,741,228
109,060,973	110,046,339	98,671,534	10,380,439	122,050,123	23,871,227	103,401,447	18,057,076
10,317,008	8,089,806	7,880,237	2,427,771	12,000,493	1,717,688	8,371,010	3,727,877
32,927,827	20,507,080	20,800,042	0,027,885	38,026,142	0,175,641	28,512,755	9,513,387
5,402,541	5,844,403	4,880,106	573,375	6,403,228	1,223,210	5,513,554	949,674
5,357,765	5,705,276	4,715,070	641,705	6,519,304	1,148,024	5,383,370	1,135,004
10,153,429	8,058,038	6,955,704	3,197,635	12,100,303	1,739,008	7,030,735	4,250,568
30,805,122	30,197,051	30,034,839	6,200,283	42,034,019	7,633,415	32,027,365	9,406,054
70,927,252	54,240,006	52,026,060	18,001,183	82,079,312	11,425,391	57,636,618	25,342,004
15,000,040	12,611,700	12,082,301	3,016,748	18,007,786	2,041,504	13,205,106	4,802,500
21,912,157	15,144,000	15,057,868	6,254,200	25,350,758	3,186,077	17,024,123	8,326,635
1,550,302	138,420	151,325	1,405,067	1,760,452	28,483	158,320	1,602,132
53,300			53,300	65,702			65,702
3,156,000	1,867,080	1,740,065	1,415,635	3,702,405	378,030	1,870,520	1,831,000
2,156,000	1,354,070	1,437,038	718,062	2,582,057	327,000	-1,017,205	965,302
8,030,030	7,557,040	6,521,893	1,509,046	9,430,206	1,035,267	7,209,308	2,100,898
18,002,755	15,365,908	15,333,780	3,028,900	22,083,130	3,228,380	16,401,820	5,601,316
48,008,335	44,701,152	36,821,897	11,780,438	57,000,458	9,450,989	38,555,080	18,511,378
1,592,385	1,402,079	1,410,001	182,204	2,003,130	207,806	1,723,722	279,414
1,315,308	1,500,784	1,114,237	201,101	1,584,473	309,476	1,225,072	358,801
219,155	222,478	192,232	20,623	283,053	43,758	226,754	50,849
4,797,400	4,035,278	3,855,777	941,632	5,783,421	970,088	4,377,477	1,405,044
311,857	250,070	230,400	72,361	388,124	51,008	208,111	120,013
641,201	358,747	380,070	260,531	743,124	72,808	423,111	321,013
2,043,054	2,251,016	1,862,085	150,000	2,425,701	453,804	1,063,322	402,400
431,817	237,100	228,040	202,877	620,000	47,450	250,978	263,001
12,771,300	13,887,192	10,743,311	2,028,070	14,003,012	3,024,287	11,154,530	3,500,282
7,352,480	8,050,304	6,223,471	1,128,050	8,467,013	1,740,849	6,324,632	2,142,081
17,132,230	11,825,038	10,541,587	6,590,652	20,202,542	2,459,469	10,611,071	9,590,871
662,814	367,000	331,500	331,314	700,288	73,400	350,875	418,013

Of the different geographic divisions the North Central was by far the most important in all items. There was reported for this group 43.6 per cent of the total number of establishments, 52.5 per cent of the capital, 54.2 per cent of the number of wage-earners, 56.3 per cent of the wages, 58.1 per cent of the cost of materials, and 57.7 per cent of the value of products for the United States.

The North Atlantic division was next in importance, and reported 27.8 per cent of the total number of establishments, 20.3 per cent of the capital, 18.4 per cent of the number of wage-earners, 17.8 per cent of wages, 16.2 per cent of the cost of materials, and 16.3 per cent of the value of products.

The South Central division was next in importance, and of the other two groups the South Atlantic division reported a larger number of establishments and wage-earners, but the Western exceeded the South Atlantic in capital, wages, cost of materials, and value of products.

As shown by Tables 5 and 13, Minnesota led all the other states in the amount of capital invested, reporting 13.1 per cent of the total for the United States, a gain over 1900 of \$11,141,464, or 47 per cent, and New York represented 9.4 per cent of the total, with a gain over 1900 of \$4,850,394, or 24.3 per cent. Pennsylvania with 7.1 per cent of the total capital, showed an increase over 1900 of \$3,779,762, or 25.2 per cent. In Ohio the capital invested in 1905 was 5.6 per cent of the total, and the increase over 1900 was \$4,158,261, or 38.6 per cent.

In number of wage-earners employed and amount paid for wages the same states led, the only difference being that Ohio held third place and Pennsylvania fourth. Minnesota gave employment to 4,481 wage-earners, or 11.5 per cent of the total, paying in wages the sum of \$2,650,818, or 13.4 per cent of the total for the United States. New York employed 7.8 per cent of the total number of wage-earners and paid 7.8 per cent of the total wages. Ohio reported 6.9 per cent of the wage-earners and paid 6.8 per cent of the total wages. Pennsylvania gave employment to 2,632 wage-earners, or 6.7 per cent of the total, and paid in wages 6.3 per cent of the total.

In Minnesota the value of products reached the sum of \$122,059,123, or 17.1 per cent of the total for the United States. The increase since 1900, the largest reported by any state, was \$39,071,069, a gain of 47.1 per cent. New York reported 7.6 per cent of the total value of products. In amount of actual increase New York was third, the gain over 1900 amounting to \$18,615,942, or 51.8 per cent. Kansas was third in value of products, with 5.9 per cent of the total, but second in amount and first in percentage of increase. Although the increase, \$20,705,272, between the censuses of 1900 and 1905 was less than that shown in Minnesota, the percentage of increase

was much greater, being 97.1 per cent. The value of products for Ohio was 5.7 per cent of the total for the United States, and the increase in value over 1900 \$5,778,013, or 16.5 per cent.

The percentage of increase in value of products for this industry is, however, misleading because of the fact that in 1904 the prices of grain, and consequently of products manufactured from grain, were considerably higher than in 1900. For this reason the percentages of increase in values are greater than those for quantities and do not represent the true increase in the milling industry. An illustration of this is found in Colorado (Table 13), where the quantity of wheat used in 1905 was 158,175 bushels less than that in 1900, the quantity of corn 639,936 bushels less, and of oats and other grain 439,919 bushels less; but the cost of the grain used in 1905 was greater than that of 1900 by \$1,037,224 and the value of products greater by \$1,342,401.

Table 6 gives the materials by kind, quantity, and cost and the products by kind, quantity, and value for the United States in 1900 and 1905.

TABLE 6.—*Materials used, by kind, quantity, and cost; and products, by kind, quantity, and value: 1905 and 1900.*

	1905	1900	Per cent of increase.
Materials used, total cost.....	\$619,971,161	\$428,116,757	44.8
Grain:			
Total bushels.....	754,945,729	729,061,820	3.6
Total cost.....	\$588,065,067	\$399,726,710	46.4
Wheat—			
Bushels.....	494,095,083	471,306,986	4.8
Cost.....	\$456,306,503	\$306,101,028	49.1
Corn—			
Bushels.....	178,217,321	180,573,076	11.2
Cost.....	\$91,758,882	\$67,817,217	35.3
Rye—			
Bushels.....	11,480,370	10,088,381	13.8
Cost.....	\$7,619,473	\$4,943,128	54.1
Buckwheat—			
Bushels.....	6,531,305	5,490,156	19.0
Cost.....	\$3,948,160	\$2,891,616	36.5
Barley—			
Bushels.....	18,628,552	10,067,348	85.0
Cost.....	\$3,847,684	\$3,748,822	136.0
Oats—			
Bushels.....	45,381,009	47,175,766	13.8
Cost.....	\$16,199,579	\$12,689,504	27.7
Other grain—			
Bushels.....	612,089	4,360,107	186.0
Cost.....	\$384,780	\$1,635,397	174.9
Barrels (purchased).....	\$4,545,074	\$4,618,715	11.6
Sacks (purchased).....	\$16,807,001	\$11,431,060	47.0
Cooperage stock, and cloth and paper for sacks.....	\$1,613,332	\$1,551,802	4.0
All other materials.....	\$11,940,687	\$10,788,470	10.7
Products, total value.....	\$713,033,395	\$501,396,304	42.2
Wheat flour:			
Barrels.....	2104,013,278	99,763,777	4.3
Value.....	\$480,258,514	\$333,997,686	43.8
Rye flour:			
Barrels.....	1,503,100	1,443,339	4.1
Value.....	\$5,892,108	\$4,145,505	42.1
Corn meal and corn flour:			
Barrels.....	23,624,693	27,838,811	115.1
Value.....	\$50,368,556	\$52,167,739	8.1
Buckwheat flour:			
Pounds.....	175,354,062	143,190,724	22.5
Value.....	\$4,379,369	\$3,190,152	37.3
Barley meal:			
Pounds.....	68,508,655	91,275,646	124.9
Value.....	\$922,884	\$963,710	14.2
Hominy and grits:			
Pounds.....	756,861,398	291,726,145	159.4
Value.....	\$8,455,420	\$2,567,034	229.4
Feed:			
Pounds.....	6,913,572,687	7,986,159,122	113.4
Value.....	\$76,096,127	\$93,011,421	20.8
Offal:			
Pounds.....	8,937,251,392	6,328,815,746	41.2
Value.....	\$76,105,532	\$36,679,196	107.5
All other products.....	\$4,554,895	\$4,673,751	12.5

¹Decrease.

²Includes 404,928 barrels of Graham flour.

At the census of 1905 there was reported for the United States a total of 754,945,729 bushels of all kinds of grain at a cost of \$585,065,067, an increase in quantity over 1900 of 25,883,939 bushels, or 3.5 per cent, while the cost increased \$185,338,357, or 46.4 per cent. Of the total number of bushels of grain of all kinds, 494,095,083, or 65.4 per cent, was wheat, the cost of which was \$456,306,503, or 78 per cent of the total expenditure for grain. The quantity of wheat used was thus nearly twice and its cost more than three times that of all of the other kinds of grain used in the mills of the country. The quantity of wheat reported in 1905 was 22,788,097 bushels greater than that for 1900, a gain of only 4.8 per cent, but its cost increased \$150,205,475, or 49.1 per cent. Corn, the grain next in importance, decreased in quantity used, 2,355,755 bushels, or 1.3 per cent. The cost, however, increased \$23,941,665, or 35.3 per cent. There was also a smaller quantity of oats used in 1905 than in 1900, although the cost increased \$3,510,075. There was a small increase in the quantity of rye, buckwheat, and barley used and a decrease in the amount of "other grain," under which is classed all kinds of grain not specifically mentioned.

Of the total value of products reported in 1905, amounting to \$713,033,395, the value of wheat flour formed 67.4 per cent and the value of offal, the principal part of which is the by-product of the manufacture of wheat flour, was 10.7 per cent. The quantity of wheat flour manufactured in 1905 shows an increase over that in 1900 of 4,249,501 barrels, or 4.2 per cent, while its value increased \$146,260,828, or 43.8 per cent. Of the other products, rye and buckwheat flour show small increases in quantity, hominy and grits an increase of more than 150 per cent, while the quantities of barley meal, corn meal and flour, and feed show small decreases.

Table 7 gives the number of establishments and the value of products for all cities reporting flour and grist mill products, valued at \$3,000,000 and over in 1905.

TABLE 7.—Cities reporting flour and grist mill products valued at \$3,000,000 and over: 1905.

CITY.	Number of establishments.	Value of products.
Minneapolis, Minn.	12	\$62,754,440
New York, N. Y.	8	11,085,674
Buffalo, N. Y.	9	9,807,906
Milwaukee, Wis.	6	6,320,428
Kansas City, Mo.	10	5,515,749
Seattle, Wash.	6	4,503,506
Indianapolis, Ind.	9	4,428,064
Louisville, Ky.	5	4,373,800
Nashville, Tenn.	4	4,242,491
St. Louis, Mo.	9	3,974,437
Chicago, Ill.	5	3,919,276
Topeka, Kans.	9	3,745,130
Toledo, Ohio	8	3,670,200
Superior, Wis.	3	3,617,819
Alton, Ill.	3	3,460,893
San Francisco, Cal.	9	3,422,072
Decatur, Ill.	5	3,407,504
Rochester, N. Y.	10	3,222,267
Detroit, Mich.	7	3,084,388

Situated at the door of the great northwestern wheat belt and with the Falls of St. Anthony furnishing an abundance of waterpower, Minneapolis has become the chief milling center of the country. Some of the largest mills in the world are located there. At the census of 1905 there were 12 mills in operation in that city, the total value of production of which amounted to \$62,754,446, an average value of products per establishment of over \$5,000,000. The value of products for Minneapolis was over five and a half times that of the next largest city, and greater than the combined output of the 11 next largest cities. New York city was second in rank, with 8 establishments, and products valued at \$11,085,674. Buffalo was third, with 9 mills, and products amounting to \$9,807,906; Milwaukee fourth, and Kansas City fifth.

Wheat flour.—Table 8 shows, by states, the number of mills manufacturing wheat flour, classified according to the annual production in barrels.

TABLE 8.—Classification of mills according to annual production of wheat flour: 1905.

STATE OR TERRITORY.	Total.	Less than 1,000 barrels.	1,000 to 4,999 barrels.	5,000 to 19,999 barrels.	20,000 to 99,999 barrels.	100,000 barrels or more.
United States.....	7,685	1,272	3,502	2,123	622	166
Alabama.....	11	3	7	1		
Arizona.....	9		4	4	1	
Arkansas.....	81	4	54	21	2	
California.....	83	8	31	22	18	4
Colorado.....	48	5	12	17	13	1
Connecticut.....	7	7				
Delaware.....	46	7	31	7	1	
District of Columbia.....	2				2	
Georgia.....	69	22	35	5	6	1
Idaho.....	28		10	13	5	
Illinois.....	302	48	106	80	47	12
Indian Territory.....	23	3	8	9	3	
Indiana.....	507	56	213	199	32	7
Iowa.....	234	58	98	62	13	3
Kansas.....	248	10	55	75	78	21
Kentucky.....	358	53	180	90	14	3
Maine.....	15	8	5	2		
Maryland.....	182	30	98	30	5	1
Massachusetts.....	8	6	2			
Michigan.....	367	50	173	110	27	7
Minnesota.....	338	20	110	130	44	34
Mississippi.....	2	2				
Missouri.....	625	60	282	125	42	10
Montana.....	12		4	4	4	
Nebraska.....	222	10	80	97	16	1
Nevada.....	9	7	3	4		
New Hampshire.....	9				1	
New Jersey.....	94	27	42	24	1	
New Mexico.....	13	2	5	6		
New York.....	304	112	92	64	22	14
North Carolina.....	213	48	126	37	2	
North Dakota.....	55	1	12	26	13	3
Ohio.....	650	40	363	226	34	6
Oklahoma.....	63	5	10	22	25	1
Oregon.....	94	7	41	35	9	2
Pennsylvania.....	870	246	457	139	23	6
Rhode Island.....	5	5				
South Carolina.....	23	6	15	2		
South Dakota.....	92	4	20	53	14	1
Tennessee.....	361	42	100	113	11	5
Texas.....	125	7	30	48	32	8
Utah.....	63	2	20	20	3	
Vermont.....	11	10	1			
Virginia.....	330	56	201	50	12	2
Washington.....	65	4	7	20	22	0
West Virginia.....	173	56	90	19	8	
Wisconsin.....	317	80	154	50	17	7
Wyoming.....	11	1	8	2		

Of the mills producing 100,000 barrels or more, Minnesota had the largest number, 34; Kansas was next, with 21; New York third, with 14; Illinois fourth, with 12; and Missouri fifth, with 10. These 5 states reported more than one-half of the mills of this size in the United States, the others being distributed among

20 of the remaining states. In the next larger class of mills Kansas had 78; Illinois, 47; Minnesota, 44; and Missouri, 42. Of the mills third in size, Ohio reported the largest number, 226; Indiana, 199; Pennsylvania, 139; Minnesota, 130; and Missouri, 125. In the next class Pennsylvania was first, with 457; Ohio second, with 353; Missouri third, with 282; Indiana fourth, with 213; and Virginia fifth, with 201. Of the small sized mills, the largest number was in Pennsylvania, which state reported 245. New York was next, with 112. Pennsylvania reported the largest number of mills of all sizes, there being 870 in the state. Ohio was second, with 659; Missouri third, with 525; and Indiana fourth, with 507. Minnesota, which led all the other states in the production of wheat flour, ranked eighth in the number of establishments manufacturing wheat flour. There were 2 states, Florida and Louisiana, for which no merchant mills grinding wheat flour were reported.

Of the 10,051 mills reporting in 1905, 7,684, or 76.5 per cent, were engaged to some extent in the manufacture of wheat flour. These mills used 494,095,083 bushels of wheat, the cost of which was \$456,306,503, an average of 92 cents per bushel. From this was manufactured 104,013,278 barrels of flour, valued at \$480,258,514, or \$4.62 per barrel, each requiring an average of 4.75 bushels of wheat. In 1900 the cost of wheat averaged 65 cents per bushel and the value of wheat flour \$3.35 per barrel, the quantity of wheat used for each barrel of flour being practically the same as in 1905. The cost of wheat per bushel and the value per barrel have thus increased about 40 per cent in the last five years.

Minnesota ranked first in the production of wheat flour at both censuses. In 1905 there was an increase of 11 mills over the number reported in 1900. The number of bushels of wheat used by these mills was an increase of 7,448,505 bushels, or 7.3 per cent, and the cost increased \$32,211,700, or 48.5 per cent. The increase in number of barrels of flour manufactured was 1,229,394, or 5.4 per cent, and in its value, \$31,231,383, or 43.3 per cent.

Kansas ranked second in 1905, advancing from ninth place in 1900. There were 10 more establishments reported, and the quantity of wheat used was

12,869,337 bushels, or 55.2 per cent greater than in 1900, the cost increasing \$17,544,380, or 134 per cent. The quantity of flour manufactured increased 2,624,651 barrels, or 52.4 per cent, and the value \$17,611,387, or 117.3 per cent. Missouri held sixth rank in 1900 and advanced to third in 1905, and New York, which was fifth in 1900, advanced to fourth in 1905. Both states made substantial gains in the quantity of flour manufactured.

Ohio, which was second in rank in 1900, was fifth in 1905. The state shows a considerable decrease in quantity of flour which dropped from 7,113,343 barrels in 1900 to 5,628,179 in 1905, although its value increased. Illinois was third in 1900 and dropped to sixth place in 1905, due rather to the increase in other states than to a decrease in its own products, as the state manufactured practically the same number of barrels in 1905 as in 1900. Indiana shows a decrease of 551,402 barrels and drops from fourth place in 1900 to seventh in 1905. Pennsylvania also shows a loss, the difference being 481,603 barrels, and the state drops from seventh to eighth place. Of the other states Wisconsin, Michigan, Tennessee, California, Iowa, Oregon, Maryland, Colorado, Utah, New Jersey, and Arkansas show decreases; and Texas, Kentucky, Washington, Virginia, Nebraska, Oklahoma, North Dakota, South Dakota, North Carolina, Georgia, and West Virginia show increases in the quantity of flour manufactured.

The average cost of wheat ranged from 77 cents per bushel in Oregon and Washington to \$1.14 in Georgia, while the average price of flour ranged from \$3.63 in Oregon to \$5.58 in Georgia, the location of the mills in reference to the wheat growing states and the cost of transportation governing the prices to a considerable extent.

Table 9 is a comparative summary of the manufacture of wheat flour, showing the number of such establishments, the quantity of wheat used and its cost, and the number of barrels of flour manufactured and its value, by states and territories, in the order of their rank. It also gives the average value per barrel of flour, number of bushels of wheat required to make a barrel of flour, and the average cost per bushel of wheat for the various states.

TABLE 9.—COMPARATIVE SUMMARY OF MERCHANT MILLS IN ORDER OF THEIR RANK AS PRODUCERS OF WHEAT FLOUR, BY STATES AND TERRITORIES HAVING A PRODUCT OF \$1,000,000 AND OVER: 1905 AND 1900.

STATE OR TERRITORY.	Census.	Number of establishments.	RAW MATERIAL, WHEAT.		PRODUCTS, FLOUR.		Rank.	Average value per barrel.	Average bushels of wheat per barrel.	Average cost per bushel.
			Bushels.	Cost.	Barrels.	Value.				
United States.....	1905 1900	7,685 7,442	494,095,083 471,306,986	\$456,306,503 305,101,028	104,013,278 99,763,777	\$480,258,514 333,997,680	..... .....	\$4.62 3.35	4.75 4.72	\$0.92 .65
Minnesota.....	1905 1900	338 327	110,046,339 102,597,834	98,071,534 66,450,834	23,871,227 22,641,833	103,401,447 72,170,064	1 1	4.33 3.19	4.61 4.53	.90 .65
Kansas.....	1905 1900	248 238	30,197,651 23,328,314	30,634,839 13,000,459	7,633,415 5,008,764	32,627,365 15,015,978	2 9	4.27 3.00	4.74 4.60	.85 .60
Missouri.....	1905 1900	525 508	29,507,080 24,028,740	26,899,942 15,427,351	6,175,541 5,022,943	28,512,755 17,029,182	3 6	4.62 3.39	4.78 4.78	.91 .64
New York.....	1905 1900	304 275	26,036,183 23,160,955	26,508,780 17,169,970	5,078,743 5,107,418	28,177,883 18,569,427	4 5	4.96 3.64	4.68 4.53	1.02 .74
Ohio.....	1905 1900	659 632	27,610,184 33,753,826	27,368,062 23,528,633	5,628,179 7,113,343	27,856,603 25,140,728	5 2	4.95 3.53	4.91 4.75	.99 .70
Illinois.....	1905 1900	302 306	28,380,202 28,198,210	26,637,126 18,960,992	5,954,680 5,932,815	27,619,401 20,320,387	6 3	4.64 3.43	4.77 4.75	.94 .67
Indiana.....	1905 1900	507 483	25,150,032 28,705,523	24,308,577 18,911,006	5,181,906 5,733,308	25,282,880 20,069,146	7 4	4.88 3.50	4.85 5.02	.97 .66
Pennsylvania.....	1905 1900	870 836	19,207,373 21,277,170	19,455,445 15,088,596	3,900,229 4,450,832	19,844,060 15,935,708	8 7	5.00 3.58	4.84 4.78	1.01 .71
Wisconsin.....	1905 1900	317 321	17,800,000 21,784,604	16,781,601 14,400,187	3,744,373 4,038,608	17,611,009 15,082,162	9 8	4.70 3.25	4.78 4.70	.94 .67
Michigan.....	1905 1900	367 372	19,092,087 19,197,782	17,047,048 13,372,561	3,901,219 4,050,320	17,155,000 14,340,601	10 10	4.40 3.54	4.80 4.74	.89 .70
Tennessee.....	1905 1900	361 333	15,144,060 10,035,045	15,057,858 11,240,604	3,186,677 3,339,040	17,024,123 12,500,403	11 11	5.34 3.77	4.75 4.80	1.03 .70
Texas.....	1905 1900	125 99	15,365,908 12,177,919	15,333,789 8,013,717	3,228,380 2,540,477	16,401,820 8,824,717	12 12	5.11 3.47	4.70 4.78	1.00 .66
Kentucky.....	1905 1900	358 318	12,611,709 12,080,158	12,082,301 8,158,644	2,641,504 2,527,699	13,205,196 9,176,202	13 13	5.00 3.63	4.77 4.78	.96 .68
Washington.....	1905 1900	65 53	13,887,162 8,772,778	10,743,311 4,250,327	3,024,287 1,853,271	11,154,330 4,719,707	14 19	3.09 2.55	4.59 4.73	.77 .48
California.....	1905 1900	83 85	11,825,938 12,744,275	10,541,587 7,023,512	2,430,469 2,053,035	10,611,671 7,028,449	15 14	4.35 2.99	4.85 4.80	.89 .60
Virginia.....	1905 1900	330 314	8,586,439 7,202,821	8,080,548 5,002,119	1,777,160 1,508,920	8,855,720 5,680,887	16 16	4.08 3.70	4.83 4.77	1.01 .70
Iowa.....	1905 1900	234 264	8,080,806 11,604,406	7,889,237 6,404,061	1,717,088 2,273,924	8,371,616 7,632,378	17 15	4.87 3.36	5.06 5.10	.91 .60
Nebraska.....	1905 1900	222 219	8,058,038 8,404,370	6,055,794 4,402,921	1,730,008 1,000,300	7,030,735 5,150,851	18 18	4.50 3.00	4.08 5.04	.80 .62
Oklahoma.....	1905 1900	63 36	7,557,640 4,363,075	6,521,893 2,377,078	1,035,267 947,093	7,269,368 2,760,354	19 23	4.45 2.02	4.62 4.63	.80 .54
Oregon.....	1905 1900	94 98	8,059,304 8,061,442	6,223,471 4,280,159	1,740,849 1,778,700	6,324,632 4,620,351	20 20	3.63 2.90	4.63 4.84	.77 .50
North Dakota.....	1905 1900	55 57	5,844,463 4,667,632	4,889,166 2,673,526	1,223,219 967,199	5,613,554 3,177,946	21 21	4.51 3.19	4.78 4.98	.84 .57
South Dakota.....	1905 1900	92 84	5,705,270 4,279,664	4,715,970 2,332,717	1,148,024 807,020	5,383,370 2,643,678	22 24	4.69 2.05	4.97 4.77	.83 .55
Maryland.....	1905 1900	182 164	5,110,510 6,744,662	4,006,624 4,744,120	1,015,952 1,401,048	4,800,634 5,157,108	23 17	4.78 3.68	5.03 4.81	.92 .70
Colorado.....	1905 1900	48 42	4,635,278 4,763,453	3,855,777 2,075,400	970,088 965,592	4,377,477 3,015,051	24 22	4.51 3.03	4.78 4.81	.83 .56
North Carolina.....	1905 1900	213 202	3,453,799 2,900,730	3,789,471 2,274,043	713,400 504,617	3,810,448 2,542,392	25 26	5.35 4.28	4.84 4.88	1.10 .78
Georgia.....	1905 1900	60 58	3,186,008 2,646,450	3,018,164 2,142,404	671,809 500,020	3,747,406 2,622,708	26 25	5.68 4.40	4.74 4.44	1.14 .81
West Virginia.....	1905 1900	173 169	3,030,288 2,940,951	3,197,056 2,057,884	626,070 590,917	3,360,150 2,284,571	27 27	5.41 3.87	4.85 4.08	1.05 .70
Utah.....	1905 1900	63 64	2,251,616 2,324,135	1,802,085 1,124,820	453,804 466,474	1,063,322 1,275,359	28 30	4.33 2.73	4.96 4.08	.84 .48
New Jersey.....	1905 1900	94 107	1,711,041 2,222,602	1,717,855 1,903,302	354,231 446,116	1,912,082 1,787,925	29 28	5.40 4.01	4.83 4.08	1.00 .75
Arkansas.....	1905 1900	81 76	1,867,680 2,504,857	1,740,065 1,588,104	378,030 524,122	1,870,526 1,769,170	30 29	4.65 3.38	4.94 4.05	.93 .61
All other states.....	1905 1900	243 302	7,773,336 7,081,050	7,241,627 4,420,672	1,588,231 1,457,030	8,085,560 5,046,006	..... .....	5.00 3.46	4.80 4.80	.93 .62

Corn products.—Table 10 is a comparative summary of the quantity and cost of corn ground, by states and territories, in the order of their importance.

TABLE 10.—Comparative summary of states and territories grinding over 1,000,000 bushels of corn: 1905 and 1900.

STATE OR TERRITORY.	Census.	CORN.	
		Bushels.	Cost.
United States.....	1905	178,217,321	\$91,758,882
	1900	180,573,076	\$67,817,217
New York.....	1905	19,747,956	11,030,517
	1900	17,843,753	7,346,287
Pennsylvania.....	1905	14,658,274	8,109,064
	1900	13,001,739	5,284,115
Illinois.....	1905	12,816,823	5,746,949
	1900	11,373,625	3,507,251
Indiana.....	1905	11,177,094	5,182,341
	1900	12,882,682	4,230,079
Ohio.....	1905	10,443,366	5,027,378
	1900	10,640,919	3,676,025
Tennessee.....	1905	9,062,184	4,801,171
	1900	8,853,032	3,704,164
Kansas.....	1905	8,790,875	3,783,630
	1900	11,187,422	3,338,340
Missouri.....	1905	8,013,969	3,615,528
	1900	9,152,031	3,171,388
Michigan.....	1905	6,256,432	3,121,460
	1900	6,407,395	2,359,441
Massachusetts.....	1905	6,247,591	3,649,038
	1900	9,117,277	3,845,799
Georgia.....	1905	5,138,934	3,211,483
	1900	3,792,211	1,863,496
Virginia.....	1905	5,086,297	2,769,322
	1900	4,457,120	1,924,536
Nebraska.....	1905	4,643,455	1,845,619
	1900	3,149,536	826,382
Maine.....	1905	4,545,168	2,749,466
	1900	4,375,896	1,987,287
Kentucky.....	1905	4,219,724	2,100,636
	1900	4,478,660	1,880,036
Texas.....	1905	4,182,282	2,177,086
	1900	2,973,153	1,044,031
Vermont.....	1905	4,118,390	2,401,439
	1900	4,188,932	1,731,841
New Jersey.....	1905	3,523,460	2,014,932
	1900	4,055,870	1,651,951
Wisconsin.....	1905	3,430,171	1,592,454
	1900	4,191,433	1,364,969
North Carolina.....	1905	2,966,052	1,825,724
	1900	2,679,432	1,313,421
New Hampshire.....	1905	2,807,347	1,641,162
	1900	3,172,036	1,324,178
West Virginia.....	1905	2,791,879	1,549,151
	1900	1,658,156	714,681
Minnesota.....	1905	2,646,411	1,159,531
	1900	3,452,826	1,037,106
Iowa.....	1905	2,463,049	1,011,436
	1900	4,198,690	1,108,167
Arkansas.....	1905	2,400,269	1,216,047
	1900	1,810,308	506,863
Connecticut.....	1905	2,289,271	1,317,763
	1900	2,644,284	1,000,936
Alabama.....	1905	2,258,428	1,291,547
	1900	1,977,325	906,722
Oklahoma.....	1905	2,206,932	885,218
	1900	1,255,599	314,413
Maryland.....	1905	1,898,891	993,781
	1900	2,184,949	830,024
Rhode Island.....	1905	1,590,601	826,905
	1900	2,526,591	1,061,121
All other states.....	1905	5,795,746	3,111,095
	1900	7,490,304	2,931,567

In the manufacture of wheat products the body of the wheat is readily separated from the outer coverings in the milling processes. The former produces flour, practically all of which enters food for human consumption, while the latter, which are known as bran and middlings and shown in these statistics as offal, are used for cattle feed. With corn, on the other hand, there is no way of determining the quantity of products manufactured from it that enters into human food. Owing to the fact, too, that other grains, such as oats, rye, barley, etc., are ground with corn in the production of feed, it is impossible to determine the exact value of the products manufactured from corn.

There were reported as ground in the mills of the United States during the census year a total of 178,217,321 bushels of corn, valued at \$91,758,882, an average cost of 51 cents per bushel. In 1900 there were 180,573,076 bushels reported, costing \$67,817,217, an average of 38 cents per bushel. There was a decrease in quantity of 2,355,755 bushels, or 1.3 per cent, but an increase in the cost of \$23,941,665, or 35.3 per cent.

New York ranked first in quantity of corn used, with 19,747,956 bushels, a gain of 1,904,203 bushels over that reported in 1900; Pennsylvania, second, with a gain of 1,656,535 bushels; and Illinois, third, with a gain of 1,443,198 bushels. Indiana and Ohio, which were fourth and fifth, show decreases in quantity. Of the other states, Tennessee, Georgia, Virginia, Nebraska, Maine, Texas, North Carolina, West Virginia, Arkansas, Alabama, and Oklahoma show increases, and Kansas, Missouri, Michigan, Massachusetts, Kentucky, Vermont, New Jersey, Wisconsin, New Hampshire, Minnesota, Iowa, Connecticut, Maryland, and Rhode Island show decreases in quantities used.

There has been a considerable increase in imports of flour during the five years, although the amount imported was small compared with the amount manufactured in this country. In 1901 the imports were 642 barrels, valued at \$3,430. In 1902 they dropped to 420 barrels, valued at \$2,610. The amount imported in 1903 was slightly larger than the previous year, and that for 1904 increased to 46,851 barrels, the largest quantity imported during any of the five years. In 1905 the number of barrels decreased to 40,801, while the value increased.

The exports of flour and grist mill products for 1901 were valued at \$72,918,834. During the five years the fluctuations were considerable. In 1903 the valuation reached the maximum \$76,096,402 and in 1905 the minimum.

The value of the wheat flour formed by far the greater part of the value of the flour and grist mill exports for each of the years shown, amounting in 1905 to \$40,176,136, or 95.6 per cent of the total.

Imports and exports.—Table 11 shows the imports of wheat flour and Table 12 the exports of flour and grist mill products for each year from 1901 to 1905, inclusive, as presented in the annual reports of the Bureau of Statistics of the Department of Commerce and Labor.

TABLE 11.—Imports of flour for each year: 1901 to 1905.¹

	1905	1904	1903	1902	1901
Wheat flour:					
Barrels.....	40,801	46,851	601	420	642
Value.....	\$176,513	\$164,100	\$4,489	\$2,610	\$3,430

¹ "Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor.

TABLE 12.—Exports of flour and grist mill products for each year: 1901 to 1905.¹

	1905	1904	1903	1902	1901
Total value.....	\$42,031,031	\$70,064,020	\$76,066,402	\$67,070,015	\$72,918,834
Corn meal:					
Barrels.....	371,565	500,774	451,506	348,034	806,877
Value.....	\$1,113,206	\$1,601,660	\$1,382,127	\$1,046,643	\$2,005,432
Rye flour:					
Barrels.....	4,721	3,160	3,757	2,360	3,105
Value.....	\$19,618	\$11,302	\$12,818	\$8,403	\$10,800
Wheat flour:					
Barrels.....	8,826,335	10,000,432	10,716,484	17,750,203	18,650,079
Value.....	\$40,176,136	\$68,804,830	\$73,756,404	\$65,661,074	\$60,450,200
Bran, middlings, and mill feed:					
Tons.....	30,203	10,103	40,513	48,080	79,358
Value.....	\$723,582	\$300,213	\$645,053	\$662,595	\$1,383,246

¹ "Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor.

The following statement shows the value of flour and grist mill products for 1905 and that of the imports and exports of these products for that year, with the percentages the imports and exports are of the value of products.

Value of products.....	\$713,033,395
Value of imports.....	\$176,513
Per cent imports form of products.....	(¹)
Value of exports.....	\$42,031,031
Per cent exports form of products.....	5.9

¹ Less than one-tenth of 1 per cent.

For the year 1905 the value of the products of the flour and grist mills amounted to \$713,033,395, of which the value of the exports was only 5.9 per cent, and the imports amounted to less than one-tenth of 1 per cent of the domestic product. The country is thus not only not dependent upon other countries for breadstuffs, but contributes a large amount to other countries.

The roller process.—The growth of the flour industry and the modern process of making roller flour were described at some length in the Census reports on flour and grist mill products published in 1880 and 1900, and it seems only necessary in this respect to refer to the growth of the industry during the past fifty years as indicative of the development of the roller process of making flour.

Other factors contributing to the growth of the industry are the constantly improving means of railroad and water transportation from the wheat fields of the northwest and the increasing demand for flour from the manufacturing centers of Europe and of the United States. To-day the industry is largely confined to big merchant mills turning out hundreds of barrels of flour a day, the neighborhood or custom mill having been driven out of business or forced to confine itself to the grinding of corn and feed for its own community.

A chemical analysis of the composition of wheat and wheat flour products will be found in Bulletin 3, part 9, of the Bureau of Chemistry, Department of Agriculture. For the purpose of this discussion it is sufficient to know that under pressure the wheat grain breaks into three parts, known commercially as flour, bran, and middlings.

The outer covering of the wheat, called bran, is a tough fibrous substance that is flattened out in the grinding process, but not broken into small particles as the other portions are. The germ of the wheat, which contains a large percentage of oil, flattens out and retains a shape similar to that of bran. The inner part, or floury portion, breaks into small fragments while the layers lying between this and the bran break into pieces between the two in size. It is this difference in the manner in which each part of the wheat breaks that permits their separation. In the old process of milling the aim was to grind as fine as possible, and thus produce the maximum quantity of flour at the first grinding. The modern mills accomplish this end by gradual reduction.

After the wheat has been freed from foreign substances and scoured to remove all impurities, it goes to the first set of rolls. These rolls are set just close enough to break the grain, it being desired to get as little flour as possible from the first break. The rolls are of corrugated steel, and so set that one revolves about three times as fast as the one paired with it, thus grinding as well as crushing the grain. The product of the break is passed through a scalping reel, a set of sieves which separate it into coarse bran, middlings, and a small amount of flour.

The coarse bran is sent to a second set of corrugated rolls, where it is broken still finer. It then goes through the sifting process again. This breaking and sifting is continued through from two to five more sets of rolls, each set crushing it finer than the preceding one, until the floury part of the grain is entirely separated from the bran. The middlings obtained from the first break, after being put through a purifying machine to remove the impurities, are passed through a set of smooth rolls, which reduce the particles to a smaller size. This is called the first reduction. The product is sifted, and the flour thus obtained is the

finest quality or first patent. The middlings from this sifting, together with those of the second break, are passed through a second set of smooth rolls for the second reduction, and then again sifted. This process is followed until the flour has been entirely removed from the middlings. The flour obtained from each successive reduction is slightly darker and of inferior quality to that of the preceding one. The product of the final reduction is so fine that it has a tendency to

clog in the meshes of the bolting cloth, and centrifugal force and brushes are usually employed to force the flour through this cloth. The whole process of manufacture, from the time the wheat enters the first machine until it is packed in barrels, is automatic.

Table 13 is a comparative summary of the industry, by states and territories, for 1900 and 1905, and Table 14 a detailed summary, by states and territories, for 1905.

TABLE 13.—COMPARATIVE SUMMARY, BY

STATE OR TERRITORY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS AND WAGES.			
				Number.	Salaries.	Total.		Men 16 years and over.	
						Average number.	Wages.	Average number.	Wages.
1 United States.....	1905	10,051	\$265,117,434	7,415	\$7,352,357	39,110	\$19,822,196	38,572	\$19,675,724
2	1900	9,476	189,281,330	5,522	5,257,991	32,226	16,285,163	31,719	16,154,827
3 Alabama.....	1905	40	371,066	29	19,673	159	53,887	158	53,731
4	1900	37	364,646	24	20,000	138	41,215	138	41,215
5 Arizona.....	1905	9	404,445	14	17,585	36	24,368	36	24,368
6	1900	9	210,012	11	9,125	36	19,970	36	19,970
7 Arkansas.....	1905	91	1,352,669	55	44,697	263	103,632	262	103,402
8	1900	79	828,315	33	20,851	277	93,886	274	93,764
9 California.....	1905	122	11,467,154	317	443,196	889	659,488	851	645,348
10	1900	107	6,493,383	195	268,992	857	525,401	825	516,144
11 Colorado.....	1905	52	2,325,671	92	103,695	244	202,778	244	202,778
12	1900	49	1,977,332	87	76,265	272	166,822	271	166,072
13 Connecticut.....	1905	86	1,335,822	46	39,044	167	85,874	159	83,614
14	1900	84	1,042,084	32	23,133	169	76,388	164	74,633
15 Delaware.....	1905	47	484,171	12	7,930	137	58,425	137	58,425
16	1900	45	925,649	18	16,956	120	45,784	119	45,584
17 Florida.....	1905	7	77,684	3	2,700	13	5,515	13	5,515
18	1900	6	64,000	4	3,500	10	3,800	10	3,800
19 Georgia.....	1905	114	1,895,718	102	95,673	464	146,095	462	145,840
20	1900	94	1,337,760	71	55,080	447	133,352	442	132,852
21 Idaho.....	1905	28	685,397	21	18,625	84	66,864	84	66,864
22	1900	26	517,745	19	13,470	68	42,333	67	42,233
23 Illinois.....	1905	363	14,128,467	465	508,767	2,410	1,210,865	2,398	1,208,362
24	1900	353	10,714,299	356	356,442	1,965	1,029,694	1,961	1,028,362
25 Indian Territory.....	1905	33	889,451	40	39,526	161	78,238	161	78,238
26	1900	26	424,529	25	17,273	97	45,116	97	45,116
27 Indiana.....	1905	566	11,906,761	345	303,321	2,289	1,091,428	2,271	1,084,828
28	1900	541	10,023,384	286	276,708	2,071	992,182	2,049	986,720
29 Iowa.....	1905	276	5,216,059	173	135,007	770	399,108	762	395,803
30	1900	309	4,946,914	172	135,996	942	424,067	935	422,467
31 Kansas.....	1905	354	13,816,887	453	451,609	1,831	1,024,465	1,810	1,020,791
32	1900	357	8,015,988	278	265,677	1,405	726,082	1,395	724,511
33 Kentucky.....	1905	388	7,342,417	254	192,744	1,373	515,158	1,337	507,660
34	1900	341	4,388,555	168	125,254	1,050	462,150	1,047	461,588
35 Louisiana.....	1905	3	50,200	1	650	4	1,738	4	1,738
36	1900	4	70,300	2	2,100	30	8,615	30	8,615
37 Maine.....	1905	161	1,422,671	28	17,574	234	108,382	233	108,070
38	1900	157	1,145,996	18	11,560	182	89,253	182	89,253
39 Maryland.....	1905	202	2,717,258	91	72,969	550	212,332	543	211,225
40	1900	196	3,005,676	85	80,275	500	212,154	492	210,924
41 Massachusetts.....	1905	142	1,881,478	41	25,472	277	154,065	276	153,565
42	1900	149	1,689,056	52	32,407	278	152,055	278	152,055
43 Michigan.....	1905	405	7,654,270	277	232,736	1,508	766,690	1,480	759,530
44	1900	395	6,919,141	200	151,871	1,329	674,708	1,328	674,458
45 Minnesota.....	1905	363	34,857,366	836	906,274	4,481	2,650,818	4,440	2,637,035
46	1900	336	23,715,902	605	730,649	4,036	2,359,998	3,887	2,309,313
47 Missouri.....	1905	582	14,834,042	458	457,714	2,345	1,090,843	2,333	1,087,459
48	1900	544	10,205,313	332	309,281	1,517	786,795	1,505	783,761
49 Montana.....	1905	12	991,191	26	46,748	67	57,096	67	57,096
50	1900	13	686,409	25	26,380	61	49,921	61	49,921
51 Nebraska.....	1905	234	6,496,878	167	153,176	863	468,268	821	452,399
52	1900	236	4,049,031	137	101,601	682	355,192	640	346,565
53 Nevada.....	1905	9	411,368	6	7,500	17	16,098	17	16,098
54	1900	9	226,977	4	2,700	13	8,586	12	8,456
55 New Hampshire.....	1905	72	1,008,936	11	8,676	128	63,454	128	63,454
56	1900	89	868,354	14	10,168	157	73,498	167	73,498
57 New Jersey.....	1905	182	2,907,250	48	36,699	454	210,689	451	210,133
58	1900	166	2,361,814	58	39,298	374	185,197	374	185,197
59 New Mexico.....	1905	13	139,420	2	1,500	29	14,352	29	14,352
60	1900	16	166,634	2	1,500	35	19,563	35	19,563
61 New York.....	1905	825	24,819,316	520	594,451	3,063	1,553,122	2,966	1,531,841
62	1900	747	19,968,922	343	413,835	2,133	1,115,700	2,056	1,100,413
63 North Carolina.....	1905	234	1,990,346	72	46,790	519	160,329	513	159,636
64	1900	217	1,519,266	56	30,276	481	129,889	475	129,414
65 North Dakota.....	1905	56	2,383,673	76	84,915	312	200,439	312	200,439
66	1900	58	1,143,939	53	46,490	272	148,505	272	148,505

FLOUR AND GRIST MILL PRODUCTS.

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STATES AND TERRITORIES: 1905 AND 1900.

WAGE-EARNERS AND WAGES--continued.				Miscellaneous expenses.	MATERIALS USED.					
Women 16 years and over.		Children under 16 years.			Total cost.	Wheat.		Corn.		
Average number.	Wages.	Average number.	Wages.			Bushels.	Cost.	Bushels.		Cost.
450 414	\$132,513 115,845	88 93	\$13,950 14,491	\$10,756,711 9,591,182	\$619,971,161 428,116,757	404,095,083 471,306,986	\$450,306,503 306,101,028	178,217,321 180,573,076	\$91,758,882 67,817,217	1 2
		1	156	29,716 19,007	1,556,392 1,366,975	138,420 492,845	151,325 342,373	2,258,428 1,977,325	1,291,547 906,722	3 4
				30,739 14,938	641,201 376,740	358,747 810,683	380,070 223,943	5,816 17,604	4,558 9,000	5 6
		1	230	70,058	3,156,600	1,867,089	1,740,965	2,400,269	1,210,047	7
		3	132	36,019	2,249,301	2,694,857	1,588,104	1,310,308	606,863	8
38 27	14,140 8,357	5	900	595,860 244,581	17,132,230 11,023,203	11,825,938 12,744,275	10,541,587 7,623,512	825,432 915,958	560,286 476,852	9 10
1	750			272,570 128,407	4,707,409 3,769,387	4,635,278 4,793,463	3,855,777 2,675,409	922,026 1,562,802	440,370 500,267	11 12
8 5	2,200 1,735			41,010 23,882	1,690,486 1,398,763	0,531 0,554	0,304 7,017	2,280,271 2,544,284	1,317,763 1,000,936	13 14
		1	200	48,415 25,276	1,315,404 901,000	832,689 700,481	818,106 490,612	750,523 751,087	305,437 270,923	15 16
				2,067 1,109	112,038 105,578			174,936 181,800	100,296 91,540	17 18
		2	255	107,123	7,264,804	3,180,908	3,618,164	5,138,934	3,211,483	19
		5	500	50,104	4,445,473	2,646,456	2,142,404	2,792,211	1,863,406	20
		1	100	80,255 21,323	1,315,398 671,560	1,509,784 1,182,401	1,114,237 489,027	10,000 4,420	6,820 2,344	21 22
7 1	1,016 300	5 3	687 1,002	805,640 625,051	34,620,657 24,936,887	28,380,202 28,198,210	26,637,126 18,900,902	12,816,823 11,373,025	5,746,949 3,507,251	23 24
				61,590 26,828	2,156,000 936,658	1,554,070 1,149,234	1,437,938 684,642	1,265,105 611,779	540,080 157,616	25 26
16 10	0,320 4,720	2 6	280 742	703,005 556,638	31,342,117 24,804,200	25,156,032 28,765,523	24,308,577 18,911,006	11,177,094 12,882,582	5,182,341 4,220,070	27 28
7 6	3,005 1,570	1 1	300 30	322,060 244,306	10,317,008 8,908,532	8,680,866 11,004,496	7,880,237 6,404,061	2,463,049 4,198,690	1,011,436 1,108,107	29 30
10 8	3,330 1,221	2 2	344 350	1,077,301 438,004	80,805,122 32,328,314	30,107,651 13,000,450	30,634,830 13,000,450	8,790,875 11,187,422	3,783,639 3,368,340	31 32
28 2	6,401 422	8 1	1,067 120	609,530 280,484	15,000,040 10,796,900	12,611,709 12,080,158	12,082,301 8,158,644	4,219,724 4,478,660	2,100,636 1,860,636	33 34
				2,495 2,035	53,360 252,882			80,430 584,000	46,758 195,760	35 36
		1	312	57,941 41,077	3,442,115 2,622,761	136,230 115,804	135,156 88,277	4,545,168 4,375,806	2,749,466 1,987,287	37 38
4 5	607 883	3 8	440 347	238,525 214,617	0,209,083 0,103,205	5,110,510 0,744,602	4,696,024 4,744,120	1,898,801 2,184,940	903,781 830,624	39 40
1	500			92,080 87,500	4,112,089 4,407,164	37,420 27,104	39,084 20,204	6,247,591 9,117,277	3,640,038 3,845,709	41 42
27	0,910	1 1	250 250	541,168 374,072	23,414,207 18,400,387	10,092,087 19,197,782	17,047,048 13,372,561	0,256,432 0,407,395	3,121,460 2,359,441	43 44
38 147	13,166 50,440	3 2	617 245	4,471,070 1,289,106	109,060,973 78,821,964	110,046,339 102,597,834	98,071,534 66,459,834	2,646,411 3,452,826	1,159,531 1,037,106	45 46
6 4	2,190 1,450	6 8	1,188 1,584	900,217 483,540	32,927,827 20,084,105	20,507,080 24,028,746	20,809,042 15,427,351	8,013,060 0,152,031	3,615,528 3,171,388	47 48
				88,552 44,708	1,502,385 774,150	1,462,970 1,108,244	1,410,061 680,070	3,117 0,301	1,909 2,250	49 50
42 37	15,800 7,836	5	701	800,587 165,090	10,153,420 6,163,485	8,658,038 8,404,370	6,955,704 4,402,921	4,043,455 3,149,530	1,845,610 826,382	51 52
1	130			20,333 8,075	431,817 118,688	237,100 147,046	228,040 93,137	7,209 40	4,690 50	53 54
				35,106 27,970	2,348,332 1,932,121	382,785 311,827	458,509 218,950	2,807,347 3,172,030	1,641,162 1,324,178	55 56
2	400	1	150	144,522 85,018	4,821,713 4,447,286	1,711,041 2,222,002	1,717,855 4,065,870	3,523,400 4,065,870	2,014,932 1,661,951	57 58
				6,384 9,283	311,857 206,262	250,676 374,532	239,406 235,550	73,777 38,296	40,907 20,905	59 60
97 77	21,281 15,287			1,726,638 904,124	47,372,493 31,058,465	26,030,183 23,100,955	26,508,780 17,843,753	19,747,950 7,340,287	11,030,517 7,340,287	61 62
		6 0	603 475	98,822 44,303	5,985,802 3,845,815	3,453,700 2,900,736	3,780,471 2,274,043	2,906,052 2,070,432	1,825,724 1,313,421	63 64
				214,010 93,180	5,462,541 3,192,379	5,844,403 4,067,082	4,880,106 2,073,526	4,300 151,684	2,150 55,785	65 66

MANUFACTURES.

TABLE 13.—COMPARATIVE SUMMARY, BY STATES

STATE OR TERRITORY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS AND WAGES.			
				Number.	Salaries.	Total.		Men 16 years and over.	
						Average number.	Wages.	Average number.	Wages.
67 Ohio.....	1905	694	\$14,931,065	438	\$422,332	2,700	\$1,339,508	2,606	\$1,312,153
68	1900	676	10,772,804	339	301,846	2,334	1,169,971	2,289	1,159,039
69 Oklahoma.....	1905	75	3,242,032	153	146,043	456	253,256	456	253,256
70	1900	40	1,023,579	80	64,585	249	120,044	247	119,944
71 Oregon.....	1905	105	3,987,069	85	106,666	395	271,183	395	271,183
72	1900	105	3,000,516	82	83,171	420	238,596	411	234,496
73 Pennsylvania.....	1905	1,195	18,765,691	306	237,394	2,632	1,246,835	2,613	1,243,120
74	1900	1,073	14,985,929	265	201,997	1,966	946,162	1,953	943,820
75 Rhode Island.....	1905	22	389,479	15	7,450	45	23,771	44	23,621
76	1900	21	480,521	19	13,506	72	35,208	72	35,208
77 South Carolina.....	1905	29	205,619	14	7,494	60	18,414	60	18,414
78	1900	26	204,667	18	8,210	94	25,248	94	25,248
79 South Dakota.....	1905	96	2,427,556	64	57,338	347	203,102	346	202,592
80	1900	86	1,646,936	52	47,350	275	148,232	273	147,832
81 Tennessee.....	1905	387	6,927,155	250	212,094	1,595	591,046	1,580	588,756
82	1900	302	4,997,169	217	191,761	1,055	500,432	1,046	498,799
83 Texas.....	1905	154	7,785,339	292	346,666	986	527,652	985	527,502
84	1900	129	3,982,811	133	144,498	682	386,892	682	386,892
85 Utah.....	1905	63	1,212,439	48	27,150	150	91,461	148	90,916
86	1900	65	978,640	47	30,720	149	75,309	148	74,996
87 Vermont.....	1905	109	1,319,735	14	10,658	185	91,464	183	90,554
88	1900	115	1,103,778	28	20,248	170	73,242	168	72,797
89 Virginia.....	1905	365	5,503,101	142	104,726	957	348,681	951	347,831
90	1900	359	3,198,207	100	66,925	613	262,039	606	260,661
91 Washington.....	1905	76	6,490,492	171	211,840	613	400,828	607	407,399
92	1900	66	2,626,729	107	123,198	482	279,040	469	276,340
93 West Virginia.....	1905	194	2,622,906	79	65,777	400	183,050	399	182,790
94	1900	185	1,429,378	22	13,846	254	124,553	253	124,385
95 Wisconsin.....	1905	389	10,545,861	234	252,986	1,351	719,682	1,344	717,790
96	1900	358	8,418,546	220	246,327	1,275	649,718	1,263	646,902
97 Wyoming.....	1905	11	222,440	6	5,305	16	11,258	16	11,258
98	1900	8	156,750	8	10,240	14	11,210	14	11,210
99 All other states.....	¹ 1905	16	263,353	13	12,772	81	37,042	81	37,042
100	² 1900	16	257,045	20	14,450	118	41,396	117	41,296

¹ Includes establishments distributed as follows: 1905, District of Columbia, 7; Mississippi, 9; grouped to avoid disclosing operations of individual establishments.

AND TERRITORIES: 1905 AND 1900—Continued.

WAGE-EARNERS AND WAGES continued.				Miscellaneous expenses.	MATERIALS USED.					
Women 16 years and over.		Children under 16 years.			Total cost.	Wheat.		Corn.		
Average number.	Wages.	Average number.	Wages.			Bushels.	Cost.	Bushels.		Cost.
01	\$26,923	3	\$492	\$992,025	\$35,620,232	27,610,184	\$27,368,062	10,443,366	\$5,027,378	67
41	10,547	4	385	597,118	20,084,083	33,753,826	23,528,633	10,640,910	3,070,025	68
		2	100	230,532	8,030,939	7,557,640	6,521,803	2,206,032	885,218	69
				85,704	2,948,401	4,363,075	2,377,078	1,255,589	314,413	70
		1	100	235,836	7,352,430	8,059,304	6,223,471	27,279	17,300	71
8	4,000			177,632	6,179,627	8,003,442	4,280,159	56,004	28,875	72
6	1,609	13	2,106	927,480	33,204,512	10,207,373	10,455,445	14,658,274	8,109,064	73
		13	2,342	557,734	24,864,786	21,277,176	15,088,506	13,001,730	5,284,115	74
1	150			13,357	1,050,438	1,070	1,707	1,500,601	826,905	75
				21,601	1,562,612	3,452	2,561	2,526,591	1,061,121	76
				7,708	633,204	258,438	279,874	483,002	321,000	77
				7,854	733,808	524,347	467,946	453,241	221,106	78
1	600	2	400	204,240	5,357,765	5,705,270	4,715,970	285,524	107,280	79
				70,205	2,684,868	4,270,604	2,332,717	250,870	65,486	80
1	300	14	1,000	488,700	21,912,157	15,144,000	15,657,858	9,062,184	4,801,171	81
		0	1,633	256,510	16,322,080	16,035,045	11,240,604	8,853,032	3,704,164	82
		1	150	810,098	18,962,755	15,365,908	15,333,780	4,182,282	2,177,086	83
				238,545	10,003,940	12,177,910	8,013,717	2,073,153	1,044,031	84
1	400	1	145	58,147	2,043,054	2,251,610	1,802,085	35,286	21,763	85
		1	313	52,712	1,201,357	2,324,135	1,124,820	55,958	28,647	86
2	910			54,155	2,872,445	15,920	15,378	4,118,390	2,401,430	87
2	445			44,110	2,287,478	25,067	17,064	4,188,032	1,731,841	88
4	1,000	6	850	223,100	12,170,620	8,580,430	8,080,548	5,080,207	2,700,322	89
		3	378	103,800	7,483,787	7,202,821	5,062,119	4,467,120	1,624,530	90
4	2,080	2	340	406,378	12,771,300	13,887,162	10,743,311	260,001	105,285	91
12	2,400	1	300	148,741	6,040,327	8,772,778	4,250,327	359,068	173,160	92
		1	260	110,063	5,213,205	3,030,288	3,107,050	2,791,870	1,540,151	93
		1	168	40,206	3,108,887	2,940,951	2,067,884	1,058,150	714,081	94
3	1,180	4	712	784,055	24,756,140	17,800,060	16,781,001	3,430,171	1,592,454	95
10	2,312	2	504	607,483	20,622,884	21,784,004	14,400,187	4,191,433	1,304,960	96
				13,240	219,155	222,478	102,232	18,915	11,000	97
				5,162	154,805	226,937	130,283	20,000	8,000	98
				10,480	662,814	367,000	331,500	543,118	205,060	99
		1	100	10,030	807,700	323,502	219,510	1,407,936	616,297	100

* Includes establishments distributed as follows: 1900, District of Columbia, 8; Mississippi, 8; grouped to avoid disclosing operations of individual establishments.

TABLE 13.—COMPARATIVE SUMMARY, BY STATES

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64	STATE OR TERRITORY.	CENSUS.	MATERIALS USED—continued.							
			Rye.		Buckwheat.		Barley.		Oats.	
			Bushels.	Cost.	Bushels.	Cost.	Bushels.	Cost.	Bushels.	Cost.
	United States.....	1905 1900	11,480,370 10,088,381	\$7,619,473 4,943,126	6,531,305 5,400,150	\$3,948,180 2,891,616	18,628,552 10,067,348	\$8,847,684 3,748,822	45,381,009 47,175,766	\$16,199,579 12,689,504
	Alabama.....	1905 1900	500 800	500 480	30 25				24,400 40,000	8,873 13,000
	Arizona.....	1905 1900					320,938 195,138	211,490 83,676	2,921	980
	Arkansas.....	1905 1900	300 200	150 125					200 20,300	60 6,105
	California.....	1905 1900	117,092 87,988	91,303 48,582	12,240 14,400	12,506 14,300	8,691,473 4,544,870	4,471,641 1,711,418	1,045,740 822,505	526,877 274,893
	Colorado.....	1905 1900	13,280 6,000	7,620 3,917	100 605	60 430	65,612 15,600	32,183 5,894	114,392 606,765	43,047 157,110
	Connecticut.....	1905 1900	11,326 29,257	8,463 15,829	6,750 15,650	4,742 10,788	11,000 1,340	5,675 708	770,136 565,262	290,300 174,740
	Delaware.....	1905 1900	350 782	198 366	14,050 10,800	7,000 6,050			8,550 23,490	3,038 6,568
	Florida.....	1905 1900							21,100 1,200	9,041 528
	Georgia.....	1905 1900	884 550	639 875					59,145 308,100	24,745 113,240
	Idaho.....	1905 1900	1,050 500	690 300			249,241 72,769	104,506 25,098	24,600 9,298	8,305 3,282
	Illinois.....	1905 1900	429,135 332,859	302,381 199,269	67,058 139,700	40,190 77,340	57,468 64,853	25,055 23,020	586,285 1,528,724	183,230 363,169
	Indian Territory.....	1905 1900			11,000 0,000				45,200	8,710
	Indiana.....	1905 1900	151,310 177,114	88,729 84,150	72,951 120,942	40,205 62,629	20,330 53,985	12,036 19,331	886,992 821,364	280,360 193,514
	Iowa.....	1905 1900	203,566 305,329	110,855 130,437	130,100 188,974	84,791 100,367	328,719 242,689	123,881 71,347	1,293,690 1,871,911	377,019 371,053
	Kansas.....	1905 1900	114,528 120,410	73,317 61,907	22,240 22,855	17,496 16,685	41,051 6,850	14,715 2,169	98,490 429,556	32,795 89,515
	Kentucky.....	1905 1900	5,780 8,725	3,406 4,456			2,000 5,200	1,000 2,625	133,321 62,275	41,457 19,792
	Louisiana.....	1905 1900							5,555 16,000	2,500 6,000
	Maine.....	1905 1900	3,830 15,242	3,496 8,662	123,876 120,400	54,012 46,570	138,425 31,439	71,274 16,334	880,238 779,727	360,501 261,076
	Maryland.....	1905 1900	87,213 75,677	56,157 37,320	60,310 40,577	37,341 20,983	3,844 13,435	1,804 5,786	239,044 101,474	60,024 31,085
	Massachusetts.....	1905 1900	80,313 281,615	57,874 143,866	5,753 13,519	3,718 7,967	23,358 50,960	11,081 20,170	688,348 1,079,841	289,787 340,241
	Michigan.....	1905 1900	922,684 549,352	502,385 260,403	761,313 512,928	429,608 267,320	178,715 113,862	85,998 48,392	2,680,717 3,709,174	1,010,640 969,131
	Minnesota.....	1905 1900	977,058 417,314	621,880 188,486	85,225 71,531	49,047 40,071	2,090,104 801,644	718,483 245,954	4,571,448 2,009,632	1,352,464 597,465
	Missouri.....	1905 1900	49,853 71,148	28,772 35,125	7,501 34,785	6,742 10,130	31,400 65,408	13,297 17,042	351,986 261,503	114,032 73,163
	Montana.....	1905 1900	1,000 2,000	650 1,200			12,329 1,595	6,123 1,007	60,600 34,446	23,060 12,967
	Nebraska.....	1905 1900	375,093 319,785	203,496 130,867	7,330 9,644	5,198 5,832	140,204 55,810	45,324 13,062	984,210 1,527,240	345,378 315,473
	Nevada.....	1905 1900	1,432	933	175 105	.....	270,593 23,697	150,001 13,100	65,261	30,183
	New Hampshire.....	1905 1900	20,981 6,830	12,300 5,143	18,200 7,480	.....	10,300 8,936	5,614 4,496	642,800 647,736	182,091 201,810
	New Jersey.....	1905 1900	396,105 414,335	256,878 212,870	141,757 137,181	86,254 71,738	17,850 1,650	8,600 670	677,347 1,805,639	271,082 676,984
	New Mexico.....	1905 1900	.....	.....	10 10	.....	350 32,000	357 26,105	1,240 1,700	620 700
	New York.....	1905 1900	2,109,653 1,350,336	1,498,573 783,737	2,398,354 1,396,742	1,493,440 732,628	450,524 319,280	228,926 147,172	9,071,846 9,055,984	3,841,647 2,723,128
	North Carolina.....	1905 1900	59,637 29,948	43,025 20,105	12,850 2,725	7,820 1,416	1,100 4,700	850 2,843	69,268 79,268	26,353 28,676

FLOUR AND GRIST MILL PRODUCTS.

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AND TERRITORIES: 1905 AND 1900—Continued.

MATERIALS USED—continued.										PRODUCTS.			
Other grain.		Barrels (purchased).	Sacks (purchased).	Cooperage stock, and cloth and paper for sacks.	Fuel.	Rent of power and heat.	Mill supplies.	All other materials.	Freight.	Wheat flour.		Total value.	
Bushels.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Barrels.	Value.		
612,080 4,300,107	\$384,780 1,635,307	\$4,545,074 4,618,715	\$16,807,001 11,431,000	\$1,613,332 1,551,802	\$5,000,087 4,331,056	\$342,040 365,073	\$600,750 1,475,893	\$1,585,314 952,590	\$3,102,978 3,062,968	\$713,033,305 501,306,304	103,608,350 99,703,777	\$478,484,601 333,007,686	1 2
250	103	6,095 6,630	66,088 52,201	575 75	22,042 10,547	800	2,891 4,250	1,133 6,859	2,500 17,723	1,750,452 1,573,075	28,483 90,386	158,320 360,683	3 4
			10,170 12,821		8,006 5,035	2,400 220	1,371 1,784	927 600	12,000 35,000	743,124 448,438	72,450 04,657	410,200 280,118	5 6
		4,248 1,585	116,506 73,607	8,781 19,026	45,418 35,478	700 454	6,700 7,040	12,156 3,577	4,893 6,638	3,702,405 2,757,668	377,700 524,122	1,860,206 1,700,170	7 8
100,150 34,550	157,415 20,955	20,000 41,103	447,264 410,171	8,620 60,000	99,380 165,056	00,800 33,072	18,507 40,820	22,051 20,371	65,901 81,342	20,202,542 13,045,200	2,408,358 2,653,036	10,470,131 7,028,449	9 10
1,406 5,142	733 2,521	900 12,000	240,835 200,723	162	52,205 40,027		6,019 17,273	6,919 12,838	101,570 128,900	5,783,421 4,441,020	602,802 905,502	4,348,518 3,015,051	11 12
10,700 99,080	8,183 30,472	105 400	11,137 9,308	214 20	13,358 11,088	3,108 5,208	1,008 5,120	9,268 3,200	748 50,000	1,981,774 1,600,974	1,305 1,513	6,700 0,342	13 14
		12,701 19,187	33,293 19,430	1,230 170	13,064 12,005		3,005 6,827	436 1,807	25,256 50,310	1,530,004 1,069,064	168,044 152,173	865,704 583,105	15 16
			1,504 2,135		934 975		203 300		8,500	137,180 128,202			17 18
2,300	1,600												
500 4,100	500 3,100	41,062 13,000	243,250 167,832	0,504 5,451	55,101 36,000	240 1,040	7,245 10,547	41,162 10,377	10,620 77,301	8,178,020 5,323,780	671,054 500,020	3,740,681 2,622,708	19 20
		450	53,717 20,558		10,574 14,032	1,552	1,053 4,848	545 1,400	2,050 3,180	1,584,473 733,573	308,780 230,723	1,222,600 502,077	21 22
1,070 40,515	908 12,556	121,083 300,202	700,200 635,271	548,237 230,840	306,200 250,830	9,536 8,983	68,136 87,608	91,848 243,825	73,353 84,693	30,892,127 28,575,357	5,930,383 5,032,815	27,542,880 20,320,387	23 24
5,000	1,500	275	84,377 42,043		20,393 17,552		3,730 4,281	1,152 145	60,537 14,169	2,582,657 1,117,445	320,880 238,014	1,010,412 730,130	25 26
14,030 74,350	0,200 32,525	285,311 245,125	551,703 501,430	20,742 38,848	375,523 202,180	4,002 5,775	45,035 74,208	01,604 20,686	72,030 93,784	30,473,543 5,733,308	5,173,360 20,332,308	25,243,700 20,000,190	27 28
50,514 125,580	21,207 20,037	4,511 8,208	280,330 313,702	4,621 1,200	145,703 154,702	7,100 5,485	23,210 40,841	25,910 19,825	201,008 118,000	12,000,403 11,012,008	1,689,716 2,273,024	8,246,200 7,032,378	29 30
23,020 97,070	0,145 20,703	85,133 90,588	1,015,240 804,544	58,711 27,052	308,185 230,000	12,414 17,422	48,877 65,057	7,555 20,240	103,001 240,007	42,034,019 21,328,747	7,000,005 5,008,704	32,532,010 15,015,076	31 32
44,280	17,300	180,300 100,127	405,204 287,504	42,757 28,007	170,772 130,007	350 400	10,304 37,064	17,778 9,244	21,004 77,833	18,007,780 13,017,043	2,640,617 2,527,000	13,201,621 9,170,202	33 34
			3,100 12,256		4,500	1,601	102 260		30,500	65,702 280,454		3,000	35 36
4,000 240,031	3,000 114,700	170 445	15,050 6,207	230	12,301 15,004	11,080 6,805	3,040 7,448	0,517 7,707	7,057 07,039	3,032,882 3,142,633	24,485 23,130	145,820 97,120	37 38
2,350 42,671	1,210 17,220	02,570 118,349	103,400 124,102	24,100 30,303	65,701 01,132	3,805 2,782	20,041 18,013	0,775 10,403	12,805 43,817	7,318,212 7,237,062	1,015,806 1,401,048	4,800,200 5,157,108	39 40
8,510 06,136	3,800 20,143	1,701 7,000	7,400 12,474	210 50	24,805 23,105	5,150 10,251	4,102 8,510	0,073 7,788	3,808 20,800	4,618,313 5,303,147	250 7,283	1,400 27,544	41 42
24,201 249,748	11,517 104,003	215,287 200,504	473,342 330,010	77,200 90,815	241,033 181,030	6,203 2,233	35,073 45,014	37,004 37,707	108,874 05,504	20,512,027 21,043,547	3,800,800 4,050,320	10,087,310 14,340,601	43 44
73,512 242,206	25,507 64,370	1,432,034 1,355,530	3,174,208 2,227,832	122,078 00,871	633,435 605,137	14,814 154,627	124,804 348,540	100,522 90,054	553,006 385,137	122,060,123 82,988,054	23,830,717 22,041,833	103,254,058 72,170,004	45 46
32,050 14,700	12,157 6,482	200,704 174,800	1,037,051 045,801	230,027 55,930	451,400 270,041	1,103 835	05,821 58,007	51,686 22,950	188,000 51,052	38,020,142 23,531,805	6,171,011 5,022,043	28,402,002 17,020,182	47 48
		0	71,540 30,321		11,820 7,221	1,800 4,800	0,070 9,042		50,301 8,125	2,003,130 937,402	207,700 244,466	1,723,072 700,080	49 50
13,000 20,775	4,085 7,485	7,140	444,901 254,055	5,056 0,686	183,205 88,155	2,230 1,850	17,330 32,184	08,575 38,802	18,430 27,031	12,100,303 7,794,130	1,730,408 1,000,390	7,807,128 5,150,851	51 52
			8,431 4,100		1,205 1,400	900	240 1,468	285	317	520,000 143,301	47,186 28,803	255,508 53	53
300 100,051	175 75,002	750 1,000	10,280 14,400	20,000 20,008	4,040 8,203	2,722 788	2,050 5,221	4,050 1,710	3,200 42,583	2,541,775 2,205,475	75,380 02,370	451,790 244,450	54 56
33,070 100,000	14,500 62,007	10,730 35,808	59,646 60,142	3,405 700	24,510 30,771	2,555 2,160	6,140 11,186	8,454 13,900	27,076 42,561	5,408,013 5,326,555	353,270 440,110	1,908,655 1,787,025	57 58
			10,001 9,027		7,152 7,630	1,320	886 1,620	1,205 300	243 50	388,124 301,273	51,008 77,005	207,811 272,167	59 60
21,033 845,230	10,080 315,327	613,822 410,885	925,730 310,480	42,805 581,138	305,006 223,103	41,030 23,618	103,443 60,600	600,524 42,587	127,498 160,732	51,540,435 35,030,403	5,037,588 5,107,418	27,003,201 18,550,427	61 62
15,070 20,080	10,406 11,131	558 171	143,020 70,611	180 115	03,208 50,131	3,740 1,300	9,372 12,107	20,240 6,040	11,100 52,145	6,803,770 4,702,514	713,370 504,617	8,816,342 2,542,302	63 64

TABLE 13.—COMPARATIVE SUMMARY, BY STATES

STATE OR TERRITORY.	CENSUS.	MATERIALS USED—continued.							
		Rye.		Buckwheat.		Barley.		Oats.	
		Bushels.	Cost.	Bushels.	Cost.	Bushels.	Cost.	Bushels.	Cost.
65 North Dakota.....	1905	300	\$210	.....	.....	204,700	\$87,041	294,413	\$79,015
66	1900	11,240	4,512	15	\$0	187,873	58,029	137,757	40,255
67 Ohio.....	1905	281,456	193,211	133,286	80,700	307,004	155,800	3,042,451	1,037,117
68	1900	201,725	107,748	137,517	74,054	50,007	21,587	3,040,911	882,730
69 Oklahoma.....	1905	2,025	1,854	.....	.....	625	500	500	150
70	1900	7,500	3,100	100	50	7,500	1,850	102,730	20,100
71 Oregon.....	1905	8,193	5,275	360	287	1,079,007	531,308	310,780	125,533
72	1900	12,748	7,585	8,775	5,323	754,532	202,801	346,837	121,460
73 Pennsylvania.....	1905	1,458,578	1,020,846	1,744,335	1,022,238	181,004	90,815	5,635,097	2,122,403
74	1900	1,738,055	722,120	1,792,699	913,403	70,639	29,740	4,950,380	1,475,700
75 Rhode Island.....	1905	6,800	5,032	.....	.....	24,050	10,780	240,634	95,073
76	1900	9,500	5,233	.....	.....	3,500	2,201	520,710	157,751
77 South Carolina.....	1905	50	35	50	50	.....	.....	3,400	1,037
78	1900	3,800	2,925	.....	.....	.....	.....	40,100	14,825
79 South Dakota.....	1905	42,090	22,460	926	600	250,508	80,335	238,205	70,717
80	1900	30,400	11,300	2,300	1,500	111,823	34,800	114,345	28,178
81 Tennessee.....	1905	7,552	4,208	4,050	2,575	8,225	8,971	10,608	3,680
82	1900	1,186	653	1,850	849	700	410	50,100	18,603
83 Texas.....	1905	6,221	5,095	.....	.....	6,391	2,806	127,000	51,000
84	1900	22,083	13,037	.....	.....	2,200	680	248,544	60,611
85 Utah.....	1905	18,733	11,611	.....	.....	70,742	42,176	5,700	2,536
86	1900	8,128	3,791	125	125	64,267	30,141	84,435	20,681
87 Vermont.....	1905	3,485	2,552	12,500	6,030	121,024	61,383	888,752	300,070
88	1900	12,820	7,348	30,000	14,821	58,777	25,014	812,320	248,800
89 Virginia.....	1905	105,020	62,631	23,182	12,303	18,537	9,192	91,720	35,172
90	1900	109,902	53,171	35,437	10,187	18,227	8,133	142,141	30,201
91 Washington.....	1905	48,499	36,322	.....	.....	1,325,825	620,334	1,055,264	373,617
92	1900	16,710	10,025	10	5	1,101,497	454,352	625,005	194,155
93 West Virginia.....	1905	60,500	40,501	93,885	50,160	3,400	1,704	480,607	178,616
94	1900	70,176	37,884	121,300	61,819	180	83	357,734	110,443
95 Wisconsin.....	1905	3,289,801	2,217,075	588,780	373,070	1,767,172	701,480	6,213,840	1,869,783
96	1900	3,213,739	1,603,188	476,266	288,740	800,873	282,000	5,008,761	1,310,414
97 Wyoming.....	1905	200	120	.....	.....	700	450	400	100
98	1900	.....	.....	.....	.....	625	405	20,625	6,550
99 All other states.....	*1905	5,000	3,000	.....	.....	.....	.....	4,500	1,804
100	*1900	2,300	1,020	.....	.....	.....	.....	10,200	6,216

*Includes establishments distributed as follows: 1905, District of Columbia, 7; Mississippi, 9; grouped to avoid disclosing operations of individual establishments.

FLOUR AND GRIST MILL PRODUCTS.

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AND TERRITORIES: 1905 AND 1900--Continued.

MATERIALS USED - continued.										PRODUCTS.			
Other grain.		Barrels (pur- chased).	Sacks (pur- chased).	Cooperage stock, and cloth and paper for sacks.	Fuel.	Rent of power and heat.	Mill supplies.	All other materials.	Freight.	Total value.	Wheat flour.		
Bushels.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.	Cost.		White.	Barrels.	Value.
10,000	\$3,225	\$2,920	\$188,651	\$30,577	\$124,541	-----	\$8,708	\$5,085	\$40,202	\$6,463,228	1,221,416	\$5,506,935	05
46,850	12,005	3,450	117,814	5,200	78,861	-----	22,810	2,888	27,100	3,849,820	607,100	3,177,946	06
44,150	25,702	237,460	635,710	130,118	374,103	\$5,856	48,979	171,805	124,955	40,855,506	5,606,458	27,704,108	07
49,203	17,700	380,009	615,004	00,217	315,204	10,703	80,525	58,955	132,843	35,077,553	7,113,343	25,140,728	08
2,500	875	2,005	508,328	7,000	112,700	5,000	9,208	2,600	81,820	9,430,206	1,632,007	7,258,828	09
38,800	10,100	4,619	130,570	-----	57,040	1,500	12,372	2,803	8,831	3,505,508	2,760,354	7,760,354	70
700	200	-----	357,370	-----	20,631	20,030	7,706	22,206	2,835	8,467,613	1,710,833	6,230,201	71
127,000	51,700	54	264,874	-----	25,200	20,514	17,548	17,475	45,973	6,136,250	1,778,799	4,020,351	72
29,082	15,458	305,305	485,070	47,150	233,217	8,407	38,882	42,117	201,000	38,518,702	3,052,440	10,704,204	73
405,312	159,020	183,849	444,000	130,818	178,270	0,937	60,801	28,384	140,226	20,570,943	4,450,832	15,935,708	74
-----	-----	150	3,741	-----	8,715	800	617	90	105,138	1,134,092	10	60	75
10,304	3,933	250	0,871	-----	7,498	800	4,044	000	308,080	1,820,106	760	2,540	76
100	100	10	17,201	-----	11,025	1,325	799	132	547	725,222	53,100	202,278	77
-----	-----	753	20,707	-----	7,008	-----	1,574	100	6,354	860,233	100,215	400,735	78
21,739	0,150	3,426	192,584	2,773	132,100	60	0,465	5,438	8,302	6,519,364	1,142,805	5,360,128	79
6,000	1,580	687	90,411	-----	63,285	650	18,473	1,108	34,884	3,208,532	807,026	2,643,078	80
1,050	430	172,001	708,034	78,887	170,555	360	20,043	12,092	200,512	25,350,758	3,184,847	17,015,408	81
304,025	92,083	239,400	517,614	28,768	142,103	175	40,100	33,981	263,092	10,161,398	3,330,040	12,500,403	82
21,500	0,200	70,882	820,040	15,068	230,941	0,925	20,003	4,413	184,808	22,083,136	8,223,300	16,466,501	83
7,700	1,000	33,733	480,040	24,000	143,538	4,024	41,239	80,344	142,555	11,048,556	2,540,477	8,824,717	84
-----	-----	-----	55,641	3,000	5,057	5,150	2,602	275	240	2,425,791	449,770	1,046,384	85
-----	-----	-----	50,997	150	7,150	2,370	5,847	1,476	0,102	1,050,233	460,474	1,276,350	86
1,200	000	80	3,520	255	8,416	1,000	3,274	5,680	1,703	3,206,075	2,007	10,240	87
93,163	40,194	1,587	0,231	-----	8,076	950	5,712	2,320	172,300	2,760,648	3,000	15,358	88
3,025	1,817	70,805	320,480	27,861	65,651	11,408	12,706	21,472	51,171	13,832,200	1,770,312	8,851,839	89
20,368	11,725	80,071	179,754	8,403	37,721	4,170	20,740	7,800	23,387	8,042,108	1,508,029	5,580,887	90
132	03	-----	580,633	080	75,132	40,024	10,640	21,065	81,784	14,063,612	2,978,204	10,000,241	91
6,980	3,032	-----	334,541	-----	52,884	10,384	31,820	1,080	132,053	6,773,574	1,853,271	4,710,707	92
1,000	000	25,411	90,506	11,778	45,050	-----	0,018	4,108	3,000	6,200,201	625,806	3,387,142	93
24,000	10,250	14,203	40,068	225	35,004	-----	0,854	4,660	13,730	3,702,020	590,917	2,284,571	94
20,065	17,000	250,872	483,322	7,230	234,056	4,321	27,554	35,808	63,008	28,352,237	3,720,363	17,531,813	95
532,720	123,048	300,085	405,003	031	185,459	7,748	47,410	34,409	71,095	23,700,874	4,038,098	15,082,162	96
-----	-----	-----	10,498	-----	2,365	-----	330	-----	2,000	283,053	43,708	220,604	97
-----	-----	-----	7,830	-----	1,031	-----	705	50	35	211,177	45,164	164,475	98
-----	-----	13,575	9,900	-----	4,108	580	1,335	250	1,372	700,288	73,400	350,375	99
-----	-----	12,546	14,475	1,000	0,469	3,300	4,852	340	8,775	1,041,075	67,862	233,244	100

*Includes establishments distributed as follows: 1000, District of Columbia, 8; Mississippi, 8; grouped to avoid disclosing operations of individual establishments.

MANUFACTURES.

TABLE 13.—COMPARATIVE SUMMARY, BY STATES

		PRODUCTS—continued.							
STATE OR TERRITORY.	Census.	Wheat flour—Continued.		Rye flour.		Buckwheat flour.		Barley meal.	
		Graham.		Barrels.	Value.	Pounds.	Value.	Pounds.	Value.
		Barrels.	Value.						
1 United States.....	1905	404,928	\$1,773,913	1,503,100	\$5,892,108	175,354,032	\$4,379,359	68,508,055	\$922,884
2	1900			1,443,330	4,145,565	143,190,724	3,130,152	91,275,046	963,710
3 Alabama.....	1905			100	562				
4	1900			100	400	750	25		
5 Arizona.....	1905	439	2,812					8,773,000	130,846
6	1900							5,057,000	64,170
7 Arkansas.....	1905	270	1,320	43	116				
8	1900								
9 California.....	1905	31,141	132,540	22,733	105,946	352,382	12,753	27,194,515	348,402
10	1900			14,582	43,641	552,000	19,572	59,084,402	571,950
11 Colorado.....	1905	7,226	28,059	2,246	7,657	2,500	75	114,000	912
12	1900			1,003	3,535	1,500	90		
13 Connecticut.....	1905	60	404	1,463	6,850	216,772	5,063	322,000	3,380
14	1900			3,444	11,288	307,050	10,596	1,880	34
15 Delaware.....	1905					378,300	9,208		
16	1900			80	205	223,500	7,090		
17 Florida.....	1905								
18	1900								
19 Georgia.....	1905	155	785	35	170				
20	1900			180	880				
21 Idaho.....	1905	696	3,063	75	310				
22	1900			100	400			234,000	1,804
23 Illinois.....	1905	15,297	76,521	77,309	279,002	2,055,372	62,210	1,272,000	20,220
24	1900			59,943	175,246	3,996,578	100,652	1,322,000	15,792
25 Indian Territory.....	1905	180	853			300,000	7,500		
26	1900								
27 Indiana.....	1905	8,540	30,120	8,416	30,790	1,985,722	56,030		
28	1900			23,478	68,382	3,320,003	89,264	45,830	854
29 Iowa.....	1905	27,072	125,317	27,207	110,700	3,537,300	105,255	1,413,280	25,162
30	1900			41,001	114,430	5,075,833	143,824	2,251,870	23,480
31 Kansas.....	1905	23,810	95,340	14,004	54,900	770,982	21,478	480,000	3,840
32	1900			17,041	44,720	706,010	26,245	10,800	134
33 Kentucky.....	1905	887	3,575	664	2,096			70,000	850
34	1900			1,044	2,194				
35 Louisiana.....	1905								
36	1900								
37 Maine.....	1905	432	2,076	658	3,518	1,093,808	30,033	188,470	3,050
38	1900			1,042	3,784	1,457,000	27,177	576,500	8,498
39 Maryland.....	1905	80	344	2,858	14,463	1,642,700	45,100		
40	1900			5,244	12,032	862,305	22,460	41,700	785
41 Massachusetts.....	1905	8,185	45,594	2,037	9,183	108,450	4,555	60,800	811
42	1900			4,720	16,613	420,773	10,063	251,192	4,077
43 Michigan.....	1905	40,410	167,780	61,842	219,597	21,930,850	524,429	205,770	2,411
44	1900			44,260	128,597	13,026,803	282,728	546,550	6,763
45 Minnesota.....	1905	31,510	146,489	132,671	543,505	2,247,420	62,513	100,000	3,200
46	1900			74,718	193,038	1,764,020	46,732	3,620,150	36,094
47 Missouri.....	1905	4,530	20,063	1,843	8,477	259,700	6,113	208,000	1,920
48	1900			7,016	20,147	977,378	24,562	2,500	58
49 Montana.....	1905	10	50	145	616			9,100	175
50	1900			640	1,020				
51 Nebraska.....	1905	9,530	42,607	51,059	198,740	224,000	7,276		
52	1900			49,762	127,634	258,240	7,413	67,000	584
53 Nevada.....	1905	270	1,380			8,225	123	56,173	1,658
54	1900								
55 New Hampshire.....	1905	1,261	7,358	1,800	6,363			275,200	4,504
56	1900			1,690	5,082	485,101	6,277	200,680	3,087
57 New Jersey.....	1905	961	4,327	28,191	103,871	3,704,760	98,043	87,000	1,068
58	1900			41,095	121,450	3,430,000	77,645	44,000	880
59 New Mexico.....	1905	60	300			300	15		
60	1900							1,000,000	20,000
61 New York.....	1905	41,155	184,592	332,719	1,424,315	66,234,663	1,639,873	7,005,960	96,844
62	1900			236,495	770,651	37,364,585	811,260	5,191,778	66,401
63 North Carolina.....	1905	21	106	1,072	6,146	132,448	3,072	48,000	950
64	1900			10,240	25,614	81,935	1,871	93,720	1,730

AND TERRITORIES: 1905 AND 1900—Continued.

PRODUCTS—continued.												
Corn meal and corn flour.		Hominy and grits.		Feed.		Offal.		All other products.	Pairs of rolls.	Runs of stone.		
Barrels.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Value.	Number.	Number.		
23,024,003 27,838,811	\$56,368,550 52,107,730	756,861,308 291,726,145	\$8,455,420 2,567,084	6,913,572,667 7,986,159,122	\$70,066,127 63,011,421	8,937,251,392 6,328,815,740	\$70,105,532 36,079,196	\$4,554,805 4,073,751	80,822 67,141	10,609 10,930	1 2	
364,902 401,133	941,770 890,901	2,570,356 2,250,000	44,234 21,500	51,441,760 23,028,040	571,170 189,088	2,891,320 8,214,606	28,980 62,902	5,398 31,076	117 95	55 40	3 4	
913 4,481	4,225 11,318	----- -----	----- -----	6,700,000 5,832,000	102,012 50,122	6,871,000 3,550,475	77,020 24,110	----- 3,600	92 62	----- 6	5 0	
353,028 273,308	831,038 519,184	222,800 -----	4,452 -----	62,778,850 37,006,064	687,760 275,367	36,792,935 30,543,393	209,544 178,475	8,275 15,356	601 543	50 77	7 8	
52,254 62,356	215,845 215,213	987,983 3,097,560	33,005 36,835	456,139,850 223,887,737	5,070,376 2,242,136	198,140,770 168,214,646	2,057,448 1,155,775	837,106 832,280	1,415 1,146	88 148	9 10	
18,419 54,758	47,658 104,266	8,038 -----	280 -----	50,823,703 104,080,230	530,460 823,448	88,660,796 73,720,673	770,310 404,630	33,586 -----	638 501	15 12	11 12	
537,072 503,222	1,321,554 1,121,073	1,180,000 -----	11,800 -----	45,875,814 39,463,358	615,709 459,208	101,000 1,210,218	1,250 11,542	20,008 68,091	40 49	115 217	13 14	
62,586 135,970	225,900 206,130	3,024,700 1,805,972	41,848 36,604	21,163,092 16,305,237	233,723 112,079	16,332,000 5,471,318	159,875 32,107	100 1,858	333 398	78 133	15 16	
18,534 24,330	47,270 63,468	200,000 134,000	5,408 1,640	6,409,503 4,901,000	84,403 62,004	----- -----	----- -----	----- 1,150	3 3	11 9	17 18	
1,217,141 884,211	3,103,001 2,069,918	300,000 5,280	5,000 110	40,421,573 37,211,786	601,137 324,806	57,302,000 20,036,392	506,382 253,861	65,710 21,404	543 504	280 372	19 20	
800 455	2,400 1,200	----- -----	----- -----	13,172,270 4,513,050	131,326 41,700	28,300,748 21,521,030	223,768 90,182	967 -----	204 190	3 10	21 22	
1,068,280 1,680,178	2,319,104 2,361,040	230,728,156 33,701,026	2,551,000 203,059	294,838,620 408,179,124	2,636,897 2,807,455	517,984,231 400,108,948	4,344,053 2,329,450	58,554 111,376	4,008 3,008	266 307	23 24	
96,678 93,509	237,490 131,593	----- -----	----- -----	51,481,702 23,181,480	477,901 156,308	28,242,600 12,670,800	240,995 82,273	----- 542	291 238	8 2	25 26	
900,622 1,987,719	2,070,200 2,601,562	182,106,165 90,714,580	2,147,012 715,640	290,735,550 381,406,807	2,650,062 2,575,001	467,895,004 370,901,370	4,044,428 2,188,722	177,057 726,512	4,940 4,522	453 410	27 28	
210,926 523,524	453,045 755,132	2,309,205 1,640,000	28,944 10,200	138,035,732 349,164,439	1,416,725 1,571,214	161,005,397 121,450,324	1,400,111 637,075	178,839 124,125	2,370 2,132	230 350	29 30	
605,413 1,131,595	1,292,243 1,574,810	9,882,080 4,671,000	118,140 37,064	358,902,808 503,617,015	3,196,104 8,178,466	647,285,277 360,261,016	4,682,886 1,440,801	37,057 9,500	3,789 3,261	182 197	31 32	
1,003,020 973,782	2,314,364 2,000,920	253,000 589,250	3,202 13,271	38,536,891 64,486,836	423,233 507,513	228,454,827 177,063,240	2,049,200 1,209,460	8,925 11,477	3,204 2,490	276 292	33 34	
----- 105,020	----- 104,800	200,000 -----	2,100 -----	4,076,000 11,220,400	65,762 89,554	----- -----	----- -----	----- -----	2 14	2 7	35 36	
900,410 973,280	2,377,373 2,113,400	2,010,000 -----	20,040 -----	90,718,070 68,061,493	1,251,110 753,985	5,128,810 10,497,067	60,401 116,027	20,562 22,570	341 210	199 238	37 38	
208,100 200,572	722,091 615,420	3,011,460 10,035,370	41,861 131,224	50,771,168 118,202,800	649,773 908,187	91,073,417 80,108,770	947,858 309,342	35,523 20,702	1,456 1,307	297 281	39 40	
1,383,547 2,164,283	3,411,100 4,238,865	750,000 2,564,600	13,500 23,134	91,040,672 90,516,388	1,111,856 940,248	385,950 18,966,481	4,150 98,876	10,155 25,127	88 77	215 239	41 42	
210,110 537,030	500,015 1,020,080	43,802 2,660,950	1,075 10,972	425,150,358 410,090,344	4,535,938 3,620,216	383,659,035 308,022,413	3,314,203 1,960,207	252,570 230,507	3,823 3,622	406 382	43 44	
66,018 153,553	154,243 232,422	801,161 5,000,000	13,353 48,000	390,434,977 407,171,008	3,721,948 3,422,326	1,867,050,806 1,380,380,014	13,967,200 6,753,070	191,714 85,708	7,333 6,137	187 248	45 46	
935,318 1,290,806	2,343,305 2,265,592	58,814,607 49,088,750	613,053 364,200	187,130,109 291,124,611	1,776,420 2,106,518	548,618,750 345,560,409	4,751,581 1,810,280	8,819 202,206	5,408 4,231	303 423	47 48	
682 1,430	2,511 2,858	7,242 -----	87 -----	2,565,302 8,620,497	31,077 57,917	28,402,309 10,564,354	244,435 56,050	----- 12,532	145 196	----- 8	49 50	
542,090 310,202	1,133,437 440,192	8,528,040 5,249,000	93,824 40,561	164,777,101 170,915,952	1,209,077 1,007,221	173,440,004 137,355,306	1,200,205 708,021	317,100 251,053	2,296 1,980	96 125	51 52	
----- 10	----- 00	----- -----	----- -----	15,540,700 1,727,056	215,157 19,120	4,780,438 2,200,000	48,050 15,322	175 300	66 50	----- 2	53 54	
674,192 728,217	1,500,080 1,408,759	500 1,712,000	10 10,282	32,300,260 52,000,386	384,184 484,451	7,630,000 1,428,800	81,228 13,535	15,250 10,940	71 35	109 158	55 56	
244,173 508,315	634,727 1,042,033	1,401,200 3,425,000	20,317 34,520	180,550,200 180,172,508	2,306,037 1,834,076	33,807,248 47,747,428	358,108 302,080	32,200 65,720	687 648	302 305	57 58	
4,505 6,019	15,000 20,173	----- -----	----- -----	3,270,000 2,377,100	49,179 24,427	4,827,900 6,734,545	55,813 54,506	----- -----	65 84	13 14	59 60	
3,004,226 2,637,282	6,028,206 5,550,454	82,014,004 607,400	857,957 6,389	803,455,681 902,617,190	10,354,492 8,238,479	440,750,271 227,854,836	4,210,280 1,705,932	856,585 231,410	4,209 3,170	1,320 1,332	61 62	
648,481 617,653	1,788,154 1,455,188	8,976,400 3,995,477	134,718 44,078	33,123,725 20,430,244	400,520 277,725	64,485,430 40,212,178	720,106 315,078	34,650 38,534	1,300 890	400 300	63 64	

TABLE 13.—COMPARATIVE SUMMARY, BY STATES

STATE OR TERRITORY.		Census.	PRODUCTS—continued.							
			Wheat flour— Continued.		Rye flour.		Buckwheat flour.		Barley meal.	
			Graham.							
			Barrels.	Value.	Barrels.	Value.	Pounds.	Value.	Pounds.	Value.
65	North Dakota.....	1905	1,803	\$0,619	50	\$300				
66		1900			936	1,986	600	\$18	96,000	\$816
67	Ohio.....	1905	21,721	92,495	43,691	181,105	3,599,618	93,967	5,221,400	82,130
68		1900			39,133	114,288	3,405,955	81,575	959,200	8,713
69	Oklahoma.....	1905	2,290	10,540	458	2,152				
70		1900			950	2,527	3,000	90	2,500	40
71	Oregon.....	1905	24,016	88,641	285	1,300	11,600	385	2,693,000	32,750
72		1900			1,854	5,661	241,900	6,238	1,049,000	10,430
73	Pennsylvania.....	1905	16,783	79,805	128,506	536,576	45,117,852	1,075,989	331,600	4,106
74		1900			124,878	385,834	46,144,362	968,470	42,240	1,018
75	Rhode Island.....	1905	329	2,033	1,760	5,531			327,000	3,280
76		1900			1,374	3,660			102,760	1,972
77	South Carolina.....	1905	50	212			1,600	60		
78		1900			740	3,190				
79	South Dakota.....	1905	5,219	23,242	2,835	11,414	26,000	1,010	40,000	700
80		1900			2,744	6,651	25,000	1,000	347,000	4,980
81	Tennessee.....	1905	1,830	8,715	40	160	103,000	2,830	139,600	1,948
82		1900			113	348	49,135	1,026	29,800	435
83	Texas.....	1905	4,990	25,229	540	2,660				
84		1900			4,019	13,448				
85	Utah.....	1905	4,025	16,938	546	2,232			14,000	300
86		1900			1,007	2,558	6,000	225	465,000	6,757
87	Vermont.....	1905	1,019	4,424	365	1,594	196,350	5,825	1,100,000	14,618
88		1900			1,159	4,111	529,394	12,813	830,465	9,772
89	Virginia.....	1905	857	3,887	2,477	6,866	564,320	14,336	150,400	2,212
90		1900			8,678	22,670	1,023,010	17,350	186,900	2,643
91	Washington.....	1905	46,023	195,089	1,115	4,670			7,164,000	87,795
92		1900			4,069	12,714	300	12	1,478,200	14,400
93	West Virginia.....	1905	804	3,014	58	234	2,213,610	61,138		
94		1900			680	1,656	3,315,625	68,536	2,300	30
95	Wisconsin.....	1905	18,010	79,196	547,097	1,990,327	15,980,819	416,517	3,439,960	38,110
96		1900			611,295	1,672,630	13,205,256	309,024	5,901,000	73,373
97	Wyoming.....	1905	50	150						
98		1900							14,900	144
99	All other states.....	¹ 1905			625	2,500				
100		² 1900			200	655				

¹ Includes establishments distributed as follows: 1905, District of Columbia, 7; Mississippi, 9; grouped to avoid disclosing operations of individual establishments.

FLOUR AND GRIST MILL PRODUCTS.

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AND TERRITORIES: 1905 AND 1900--Continued.

PRODUCTS--continued.									Pairs of rolls.	Runs of stone.	
Corn meal and corn flour.		Hominy and grits.		Feed.		Offal.		All other products.			
Barrels.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Value.	Number.	Number.	
2,475	\$4,745	22,008	\$417	22,440,000	\$180,230	105,807,004	\$755,846	\$3,881	640	4	65
				55,722,004	406,705	44,222,000	250,153	1,400	570	11	90
1,006,703	2,432,020	69,800,258	690,171	406,557,945	4,151,804	533,453,403	4,821,108	537,502	0,451	558	67
1,201,070	2,260,483	5,440,050	54,513	013,880,150	4,552,010	300,077,800	2,383,732	482,505	5,424	594	98
100,545	200,407			101,638,337	920,520	128,703,339	982,637	1,182	872	10	60
160,180	237,575			50,585,723	204,307	52,048,032	287,105	4,450	403	11	70
885	3,305	225,651	4,515	64,541,124	813,442	132,054,101	1,247,728	30,100	941	55	71
8,632	10,283	24,000	480	99,005,479	717,972	93,309,088	538,822	220,013	897	58	72
1,067,063	2,601,670	33,938,974	411,570	820,403,535	9,000,420	371,285,404	3,774,327	180,900	0,630	1,808	73
864,007	1,684,721	10,308,420	107,703	852,801,201	7,085,043	325,005,312	2,309,692	41,734	5,341	1,024	74
307,917	622,280			18,163,488	200,908				18	30	75
598,923	1,506,021	10,000	100	30,610,032	230,024	1,758,000	11,104	55,085	11	30	76
113,622	314,257	2,336,100	32,320	2,200,075	32,302	5,044,110	53,134	500	157	42	77
88,791	204,183	1,805,250	14,804	8,522,531	88,321	7,820,310	57,774	4,220	172	81	78
23,308	40,571			37,427,382	286,438	111,000,300	780,371	400	951	21	79
14,652	23,480			28,181,076	185,130	67,735,008	341,573	2,040	748	14	80
2,052,705	4,771,722	30,000,400	421,200	63,810,018	670,234	278,750,114	2,442,000	9,512	3,263	387	81
2,002,032	3,905,887	10,405,400	104,348	80,003,500	632,603	270,344,441	1,734,492	41,076	2,480	308	82
500,375	1,477,014	128,000	1,920	122,755,403	1,371,374	278,903,077	2,705,334	33,014	1,822	64	83
601,011	1,140,700			101,113,206	720,313	103,551,373	1,105,774	128,514	1,214	89	84
1,057	5,310	11,000	270	0,350,320	75,330	44,933,448	303,171	15,850	585	29	85
1,492	4,113	10,000	150	21,001,500	193,034	28,922,126	172,177	4,800	487	27	86
900,760	2,100,276	1,041,300	14,041	80,023,682	1,032,712	336,000	3,380	9,005	81	100	87
898,803	1,862,701	200,000	4,950	73,444,951	791,085	9,000,713	70,251	7,038	107	212	88
1,218,204	2,844,040	2,013,300	34,388	40,020,148	500,054	100,028,921	1,540,814	14,057	2,155	573	89
1,046,400	2,150,577	2,805,300	20,405	45,501,811	383,503	121,200,530	724,002	25,011	1,608	544	90
7,025	21,034	27,080	744	62,717,710	1,080,480	218,724,431	1,033,974	380,585	875	31	91
10,220	20,140			100,720,323	1,004,735	115,738,514	640,908	351,772	703	80	92
330,872	841,827	2,172,000	20,708	105,126,206	1,281,108	58,110,482	588,982	7,078	1,101	227	93
334,275	711,908	101,000	2,025	42,717,335	404,700	52,500,208	315,911	3,163	811	207	94
95,801	240,051	50,000	830	487,020,273	4,016,055	370,084,210	3,033,508	90,170	4,072	301	95
232,072	403,005	17,550,000	175,400	600,781,200	4,840,278	188,720,273	1,037,022	98,380	4,140	370	96
74	204			1,000,000	13,044	4,001,700	43,051		80	3	97
				1,708,800	17,500	4,108,000	28,908		61		98
120,544	203,081	05,000	1,248	3,057,800	43,004	7,578,000	77,280		126	20	99
300,213	581,827	4,703,000	60,887	14,825,404	112,058	3,520,000	25,700	17,644	72	35	100

*Includes establishments distributed as follows: 1000, District of Columbia, 8; Mississippi, 8; grouped to avoid disclosing operations of individual establishments.

TABLE 14.—FLOUR AND GRIST MILL PRODUCTS—DETAILED

	United States.	Alabama.	Arizona.	Arkansas.	California.	Colorado.
1 Number of establishments.....	10,051	40	9	91	122	52
2 Capital:						
3 Total.....	\$265,117,434	\$371,666	\$404,445	\$1,252,669	\$11,467,154	\$2,325,671
4 Land.....	\$22,969,996	\$35,920	\$9,090	\$96,406	\$1,219,227	\$141,167
5 Buildings.....	\$48,634,410	\$89,472	\$63,733	\$246,085	\$1,669,723	\$429,850
6 Machinery, tools, and implements.....	\$68,628,575	\$108,065	\$86,500	\$511,942	\$2,183,835	\$616,425
7 Cash and sundries.....	\$124,884,453	\$147,209	\$245,212	\$498,236	\$6,394,369	\$1,138,229
8 Proprietors and firm members.....	13,098	42	116	116	94	26
9 Salaried officials, clerks, etc.:						
10 Total number.....	7,415	29	14	55	317	92
11 Total salaries.....	\$7,352,357	\$19,673	\$17,585	\$44,697	\$443,196	\$103,695
12 Officers of corporations—						
13 Number.....	1,450	3	6	7	45	11
14 Salaries.....	\$2,216,192	\$1,100	\$10,400	\$7,600	\$132,720	\$13,650
15 General superintendents, managers, clerks, etc.—						
16 Total number.....	5,965	26	8	48	272	81
17 Total salaries.....	\$5,136,165	\$17,773	\$7,185	\$37,097	\$310,476	\$90,045
18 Men—						
19 Number.....	5,065	24	8	46	242	79
20 Salaries.....	\$4,723,450	\$17,038	\$7,185	\$36,617	\$287,617	\$89,265
21 Women—						
22 Number.....	900	2	2	2	30	2
23 Salaries.....	\$412,715	\$675	—	\$480	\$22,605	\$780
24 Wage-earners, including pieceworkers, and total wages:						
25 Greatest number employed at any one time during the year.....	48,449	189	49	349	1,170	358
26 Least number employed at any one time during the year.....	34,168	161	37	257	826	193
27 Average number.....	39,110	159	36	263	889	244
28 Total wages.....	\$19,822,196	\$53,887	\$24,308	\$103,632	\$659,488	\$202,778
29 Men 16 years and over—						
30 Average number.....	38,572	158	36	262	851	244
31 Wages.....	\$19,675,724	\$53,731	\$24,308	\$103,402	\$645,348	\$202,778
32 Women 16 years and over—						
33 Average number.....	450	—	—	—	38	—
34 Wages.....	\$132,513	—	—	—	\$14,140	—
35 Children under 16 years—						
36 Average number.....	88	1	—	1	—	—
37 Wages.....	\$13,959	\$156	—	\$230	—	—
38 Average number of wage-earners, including pieceworkers, employed during each month:						
39 Men 16 years and over—						
40 January.....	38,471	148	33	261	797	224
41 February.....	38,330	148	33	261	809	239
42 March.....	38,458	150	30	255	817	234
43 April.....	37,211	157	32	228	801	234
44 May.....	36,370	150	30	230	834	226
45 June.....	36,375	158	36	232	842	215
46 July.....	37,668	166	37	262	871	205
47 August.....	38,805	166	37	277	904	232
48 September.....	40,089	165	41	268	923	280
49 October.....	40,789	164	40	294	896	302
50 November.....	40,434	160	40	287	874	284
51 December.....	39,864	164	41	269	844	253
52 Women 16 years and over—						
53 January.....	416	—	—	—	44	—
54 February.....	406	—	—	—	38	—
55 March.....	437	—	—	—	42	—
56 April.....	400	—	—	—	41	—
57 May.....	365	—	—	—	32	—
58 June.....	345	—	—	—	30	—
59 July.....	360	—	—	—	29	—
60 August.....	381	—	—	—	31	—
61 September.....	568	—	—	—	42	—
62 October.....	623	—	—	—	42	—
63 November.....	580	—	—	—	44	—
64 December.....	519	—	—	—	41	—
65 Children under 16 years—						
66 January.....	80	1	—	1	—	—
67 February.....	80	1	—	1	—	—
68 March.....	80	1	—	1	—	—
69 April.....	79	1	—	1	—	—
70 May.....	82	1	—	1	—	—
71 June.....	84	1	—	1	—	—
72 July.....	92	1	—	1	—	—
73 August.....	98	1	—	1	—	—
74 September.....	96	1	—	1	—	—
75 October.....	96	1	—	1	—	—
76 November.....	96	1	—	1	—	—
77 December.....	93	1	—	1	—	—
78 Miscellaneous expenses:						
79 Total.....	\$19,756,711	\$29,716	\$30,739	\$70,058	\$595,860	\$272,570
80 Rent of works.....	\$993,356	\$9,200	\$4,800	\$2,590	\$20,825	\$2,680
81 Taxes, not including internal revenue.....	\$1,603,589	\$2,933	\$2,980	\$3,629	\$60,215	\$23,224
82 Rent of offices, interest, insurance, and all other sundry expenses, not hitherto included.....	\$17,464,548	\$15,983	\$22,959	\$58,839	\$514,704	\$246,666
83 Contract work.....	\$95,218	\$1,600	—	—	\$116	—
84 Materials used:						
85 Aggregate cost.....	\$619,971,161	\$1,556,392	\$641,201	\$3,156,600	\$17,132,239	\$4,797,409
86 Wheat—						
87 Bushels.....	494,095,083	138,420	358,747	1,867,689	11,825,938	4,635,278
88 Cost.....	\$459,306,503	\$151,325	\$380,670	\$1,740,965	\$10,541,587	\$3,855,777
89 Corn—						
90 Bushels.....	178,217,321	2,258,428	5,816	2,400,269	825,432	922,926
91 Cost.....	\$91,758,882	\$1,291,547	\$4,558	\$1,216,047	\$569,286	\$449,370
92 Rye—						
93 Bushels.....	11,480,370	500	—	390	117,632	13,289
94 Cost.....	\$7,619,473	\$500	—	\$150	\$91,303	\$7,620
95 Buckwheat—						
96 Bushels.....	6,531,305	—	—	—	12,240	100
97 Cost.....	\$3,948,160	—	—	—	\$12,506	\$60
98 Barley—						
99 Bushels.....	18,628,552	—	320,938	—	8,096,473	65,612
100 Cost.....	\$8,847,684	—	\$211,490	—	\$4,471,641	\$32,183
101 Oats—						
102 Bushels.....	45,381,009	23,400	—	200	1,045,740	114,392
103 Cost.....	\$16,199,579	\$8,873	—	\$60	\$526,877	\$43,047

FLOUR AND GRIST MILL PRODUCTS.

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SUMMARY, BY STATES AND TERRITORIES: 1905.

Connecticut.	Delaware.	Florida.	Georgia.	Idaho.	Illinois.	Indian Territory.	Indiana.	Iowa.	Kansas.	Kentucky.	
80	47	7	114	28	363	33	500	276	354	388	1
\$1,335,822	\$484,171	\$77,084	\$1,895,718	\$685,307	\$14,128,467	\$880,451	\$11,006,761	\$5,210,050	\$13,810,887	\$7,342,417	2
\$152,377	\$47,690	\$12,550	\$219,630	\$30,250	\$806,760	\$31,050	\$831,436	\$553,440	\$907,082	\$414,970	3
\$340,806	\$89,500	\$12,365	\$362,575	\$127,739	\$2,824,240	\$196,847	\$2,214,238	\$1,105,895	\$2,431,205	\$1,188,107	4
\$158,530	\$141,600	\$14,240	\$575,973	\$240,047	\$3,592,236	\$367,788	\$3,501,817	\$1,714,220	\$3,091,710	\$1,871,010	5
\$684,049	\$205,312	\$38,529	\$737,540	\$277,455	\$9,815,231	\$203,166	\$5,350,770	\$1,843,004	\$9,885,084	\$3,807,421	6
98	65	8	146	22	412	45	830	377	429	617	7
40	12	3	102	21	465	40	345	173	453	254	8
\$30,044	\$7,030	\$2,700	\$95,673	\$18,625	\$508,767	\$30,526	\$303,321	\$135,007	\$451,009	\$102,744	9
10	2	-----	25	7	103	4	74	35	107	43	10
\$0,700	\$2,600	-----	\$38,020	\$0,750	\$180,140	\$3,000	\$96,585	\$47,006	\$147,095	\$47,490	11
30	10	3	77	14	302	36	271	138	346	211	12
\$20,344	\$5,330	\$2,700	\$57,653	\$11,875	\$328,021	\$35,020	\$200,730	\$87,941	\$304,514	\$145,254	13
31	0	3	73	14	322	35	237	122	200	184	14
\$26,038	\$4,014	\$2,700	\$55,693	\$11,875	\$309,784	\$35,020	\$180,533	\$81,941	\$283,303	\$135,247	15
5	1	-----	4	-----	40	1	44	10	50	27	16
\$2,400	\$410	-----	\$1,000	-----	\$18,837	\$900	\$17,203	\$6,000	\$21,151	\$10,007	17
107	147	17	507	100	2,910	311	2,751	935	2,442	1,741	18
103	130	14	306	78	2,100	121	1,923	749	1,574	1,245	19
107	137	13	404	84	2,410	161	2,280	770	1,831	1,373	20
\$85,874	\$58,425	\$5,515	\$140,095	\$60,804	\$1,210,805	\$78,238	\$1,091,428	\$309,108	\$1,024,405	\$515,158	21
150	137	13	402	84	2,308	101	2,271	762	1,810	1,337	22
\$83,614	\$58,425	\$5,515	\$146,840	\$60,804	\$1,208,362	\$78,238	\$1,084,828	\$395,803	\$1,020,701	\$507,060	23
8	-----	-----	-----	-----	7	-----	16	7	10	28	24
\$2,260	-----	-----	-----	-----	\$1,010	-----	\$0,320	\$3,005	\$3,330	\$0,401	25
-----	-----	-----	2	-----	5	-----	2	1	2	8	26
-----	-----	-----	\$255	-----	\$587	-----	\$280	\$300	\$344	\$1,097	27
100	130	13	460	88	2,337	104	2,210	742	1,800	1,220	28
157	132	13	465	89	2,340	151	2,252	742	1,814	1,230	29
160	135	13	470	82	2,382	155	2,245	731	1,753	1,250	30
153	138	13	449	77	2,308	157	2,162	711	1,694	1,240	31
155	138	13	450	77	2,268	155	2,148	720	1,663	1,204	32
155	130	12	401	77	2,274	152	2,147	715	1,657	1,292	33
154	139	13	470	72	2,308	153	2,314	731	1,695	1,510	34
155	138	13	472	82	2,409	171	2,374	781	1,810	1,530	35
157	141	13	463	90	2,531	173	2,342	813	1,944	1,471	36
160	141	12	407	91	2,487	169	2,385	818	1,988	1,379	37
166	138	14	400	90	2,505	169	2,331	826	2,040	1,337	38
170	138	14	457	93	2,477	163	2,336	814	1,802	1,315	39
8	-----	-----	-----	-----	7	-----	16	2	10	28	40
8	-----	-----	-----	-----	7	-----	16	2	11	28	41
8	-----	-----	-----	-----	7	-----	16	1	7	28	42
8	-----	-----	-----	-----	7	-----	16	1	7	28	43
8	-----	-----	-----	-----	7	-----	17	3	7	28	44
8	-----	-----	-----	-----	7	-----	16	4	7	28	45
8	-----	-----	-----	-----	7	-----	17	5	8	28	46
8	-----	-----	-----	-----	7	-----	17	13	28	28	47
8	-----	-----	-----	-----	7	-----	16	13	35	28	48
8	-----	-----	-----	-----	7	-----	17	14	43	28	49
8	-----	-----	-----	-----	7	-----	16	13	36	28	50
8	-----	-----	-----	-----	7	-----	17	13	29	28	51
-----	-----	-----	2	-----	4	-----	2	1	2	5	52
-----	-----	-----	2	-----	5	-----	2	1	2	5	53
-----	-----	-----	2	-----	5	-----	2	1	1	5	54
-----	-----	-----	2	-----	5	-----	2	1	1	5	55
-----	-----	-----	2	-----	5	-----	2	1	1	5	56
-----	-----	-----	2	-----	5	-----	2	1	-----	9	57
-----	-----	-----	2	-----	5	-----	2	1	1	9	58
-----	-----	-----	2	-----	5	-----	2	1	3	11	59
-----	-----	-----	2	-----	5	-----	2	1	4	12	60
-----	-----	-----	2	-----	5	-----	2	1	10	10	61
-----	-----	-----	2	-----	5	-----	2	1	3	10	62
-----	-----	-----	2	-----	5	-----	2	1	2	10	63
\$41,010	\$48,415	\$3,067	\$107,128	\$50,265	\$805,040	\$61,500	\$703,605	\$322,000	\$1,077,301	\$809,530	64
\$5,243	\$11,470	\$510	\$2,240	\$2,100	\$22,550	\$30	\$12,437	\$12,555	\$20,493	\$5,000	65
\$7,287	\$1,044	\$007	\$15,120	\$0,000	\$64,032	\$4,740	\$80,331	\$33,844	\$82,501	\$40,607	66
\$28,480	\$35,205	\$1,850	\$179,704	\$47,165	\$715,355	\$50,823	\$684,834	\$270,070	\$905,397	\$550,293	67
-----	-----	-----	\$50	-----	\$3,100	-----	\$7,003	\$485	-----	\$3,650	68
\$1,090,480	\$1,315,404	\$112,038	\$7,204,804	\$1,815,308	\$34,020,657	\$2,156,000	\$31,342,117	\$10,317,008	\$30,805,122	\$15,000,040	69
6,531	832,080	-----	3,180,008	1,500,784	28,980,202	1,554,070	25,150,032	8,080,860	36,107,651	12,011,700	70
\$0,904	\$818,106	-----	\$3,018,104	\$1,114,297	\$20,637,126	\$1,437,938	\$24,308,577	\$7,880,287	\$30,634,830	\$12,082,301	71
2,280,271	750,523	174,086	5,138,034	10,000	12,816,823	1,265,105	11,177,094	2,463,049	8,790,875	4,210,724	72
\$1,817,763	\$305,437	\$100,206	\$3,211,483	\$0,820	\$5,740,040	\$540,080	\$5,182,341	\$1,011,436	\$3,783,630	\$2,100,630	73
11,326	350	-----	884	1,650	420,135	-----	151,310	203,560	114,528	5,780	74
\$8,403	\$108	-----	\$630	\$690	\$302,381	-----	\$88,720	\$116,855	\$73,817	\$3,400	75
6,750	14,050	-----	-----	-----	07,058	-----	72,051	130,160	22,246	-----	76
\$4,742	\$7,000	-----	-----	-----	\$40,100	-----	\$46,205	\$34,701	\$17,406	-----	77
11,090	-----	-----	-----	240,241	57,468	-----	26,330	328,719	41,051	2,000	78
\$5,675	-----	-----	-----	\$104,506	\$25,055	-----	\$12,036	\$123,881	\$14,715	\$1,000	79
770,136	8,550	21,100	50,145	24,000	580,285	-----	886,092	1,203,000	98,400	135,321	80
\$200,300	\$3,638	\$0,041	\$24,745	\$8,395	\$183,230	-----	\$280,300	\$377,010	\$32,705	\$41,457	81

TABLE 14.—FLOUR AND GRIST MILL PRODUCTS—DETAILED

		United States.	Alabama.	Arizona.	Arkansas.	California.	Colorado.
Materials used—Continued.							
Aggregate cost—Continued.							
82	Other grain—						
83	Bushels.....	612,080	250			100,150	1,466
84	Cost.....	\$384,780	\$163			\$157,415	\$733
85	Barrels (purchased).....	\$4,545,074	\$6,005		\$4,248	\$20,960	\$900
86	Sacks (purchased).....	\$16,807,001	\$66,088	\$19,170	\$116,500	\$447,264	\$240,835
87	Cooperage stock and cloth and paper for sacks.....	\$1,613,332	\$575		\$8,781	\$8,626	\$162
88	Fuel.....	\$5,999,987	\$22,042	\$8,606	\$45,418	\$99,389	\$52,205
89	Rent of power and heat.....	\$342,049	\$800	\$2,400	\$700	\$69,806	
90	Mill supplies.....	\$900,750	\$2,801	\$1,371	\$6,706	\$18,567	\$6,019
91	All other materials.....	\$1,585,314	\$1,133	\$927	\$12,156	\$22,051	\$6,019
	Freight.....	\$3,102,078	\$2,500	\$12,000	\$4,863	\$65,901	\$101,570
Products:							
92	Aggregate value.....	\$713,033,305	\$1,750,452	\$743,124	\$3,702,495	\$20,202,542	\$5,783,421
93	Wheat flour—						
94	Total barrels.....	104,013,278	28,483	72,808	378,030	2,430,409	970,088
	Total value.....	\$480,258,514	\$158,320	\$422,111	\$1,870,530	\$10,611,671	\$4,377,777
95	White—						
96	Barrels.....	103,608,350	28,483	72,459	377,700	2,408,358	962,862
	Value.....	\$478,484,001	\$158,320	\$419,299	\$1,860,206	\$10,479,131	\$4,348,518
97	Graham—						
98	Barrels.....	404,028		439	270	31,141	7,220
	Value.....	\$1,773,913		\$2,812	\$1,320	\$132,540	\$23,950
99	Rye flour—						
100	Barrels.....	1,593,100	100			22,733	2,246
	Value.....	\$5,802,108	\$502			\$105,946	\$7,657
101	Buckwheat flour—						
102	Pounds.....	175,354,002				352,382	2,500
	Value.....	\$4,370,350				\$12,753	\$75
103	Barley meal—						
104	Pounds.....	98,508,655		8,773,000		27,104,515	114,000
	Value.....	\$922,884		\$130,840		\$348,402	\$612
105	Corn meal and corn flour—						
106	Barrels.....	23,624,043	304,092	913	353,028	52,254	18,410
	Value.....	\$56,308,556	\$941,779	\$4,225	\$831,938	\$215,845	\$47,058
107	Hominy and grits—						
108	Pounds.....	750,801,308	2,570,350		222,800	987,983	8,038
	Value.....	\$8,465,420	\$44,234		\$4,462	\$33,905	\$280
109	Feed—						
110	Pounds.....	6,913,572,097	51,441,706	6,760,000	62,778,850	456,130,856	50,823,703
111	Value.....	\$70,090,127	\$571,170	\$102,012	\$987,700	\$5,070,376	\$530,400
112	Offal—						
113	Pounds.....	8,937,251,392	2,801,320	6,871,000	36,792,935	108,140,770	88,669,700
	Value.....	\$70,105,532	\$28,980	\$77,930	\$209,544	\$2,057,448	\$770,310
	All other products.....	\$4,554,895	\$5,308		\$8,275	\$837,190	\$33,580
Machinery and capacity:							
114	Pairs of rolls, number.....	80,822	117	92	901	1,415	638
115	Runs of stone, number.....	10,909	55		50		15
116	Estimated maximum capacity per day of twenty-four hours, barrels.....	1,432,457					
Power:							
117	Number of establishments reporting.....	10,018	40	9	91	122	62
118	Total horsepower.....	780,042	2,134	465	4,435	11,500	5,933
	Owned—						
	Engines—						
119	Steam—						
120	Number.....	6,530	36	8	84	74	42
	Horsepower.....	473,089	1,770	266	3,851	7,132	4,455
121	Gas or gasoline—						
122	Number.....	1,006				14	1
	Horsepower.....	20,326				240	21
123	Water wheels—						
124	Number.....	7,201	12	4	12	24	24
	Horsepower.....	258,111	278	172	534	875	1,451
125	Water motors—						
126	Number.....	12					
	Horsepower.....	241					
127	Electric motors—						
128	Number.....	232	1		1	5	1
	Horsepower.....	4,724	10		5	505	0
129	Other power—						
130	Number.....	13					
	Horsepower.....	388					
	Rented—						
131	Electric motors—						
132	Number.....	880	4	2	1	54	
133	Horsepower.....	15,584	70	27	30	2,720	
134	Other kind, horsepower.....	970			15	37	
	Furnished to other establishments, horsepower.....	3,534				55	

FLOUR AND GRIST MILL PRODUCTS.

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SUMMARY, BY STATES AND TERRITORIES: 1905—Continued.

Connecticut.	Delaware.	Florida.	Georgia.	Idaho.	Illinois.	Indian Territory.	Indiana.	Iowa.	Kansas.	Kentucky.	
16,760			500		1,070	5,000	14,030	50,514	23,020		82
\$8,183			\$500		\$808	\$1,500	\$0,200	\$21,207	\$0,145		83
\$105	\$12,791		\$41,002		\$121,083	\$275	\$285,311	\$4,511	\$85,133	\$186,300	84
\$11,137	\$33,203	\$1,504	\$243,250	\$53,717	\$700,200	\$84,377	\$551,703	\$280,330	\$1,615,240	\$405,204	85
\$214	\$1,230		\$9,604		\$548,237		\$20,742	\$4,021	\$58,711	\$42,757	86
\$13,353	\$13,004	\$034	\$55,191	\$10,674	\$300,200	\$20,303	\$375,523	\$145,793	\$308,185	\$170,772	87
\$4,108			\$240	\$1,552	\$0,530		\$4,002	\$7,109	\$12,414	\$350	88
\$1,003	\$5,005	\$203	\$7,245	\$1,053	\$68,130	\$3,739	\$45,035	\$23,210	\$48,877	\$10,304	89
\$9,208	\$400		\$41,162	\$545	\$91,848	\$1,152	\$61,004	\$25,910	\$7,555	\$17,778	90
\$748	\$25,250		\$10,020	\$2,950	\$73,353	\$80,537	\$72,030	\$201,008	\$103,001	\$21,004	91
\$1,081,774	\$1,530,004	\$137,180	\$8,178,920	\$1,684,473	\$30,802,127	\$2,582,657	\$36,473,543	\$12,000,403	\$42,034,010	\$18,007,786	92
1,374	108,044		671,800	300,476	5,954,680	327,000	5,181,006	1,717,688	7,633,415	2,641,504	93
\$7,104	\$805,704		\$3,747,400	\$1,225,072	\$27,610,401	\$1,617,265	\$25,282,880	\$8,371,610	\$32,027,365	\$13,205,196	94
1,305	108,044		671,054	308,780	5,930,383	326,880	5,173,360	1,680,710	7,600,005	2,640,017	95
\$0,700	\$805,704		\$3,740,081	\$1,222,000	\$27,542,880	\$1,610,412	\$25,243,700	\$8,240,200	\$32,532,010	\$13,201,021	96
60			155	600	15,207	180	8,540	27,072	23,810	887	97
\$404			\$785	\$3,063	\$70,521	\$853	\$30,120	\$125,317	\$95,340	\$3,575	98
1,402			35	75	77,300		8,416	27,207	14,004	604	99
\$0,850			\$170	\$310	\$270,002		\$30,700	\$110,700	\$54,900	\$2,006	100
210,772	378,300				2,055,372		1,085,725	3,537,300	770,082		101
\$5,003	\$0,208				\$62,210		\$50,030	\$105,255	\$21,478		102
822,000					1,272,000			1,413,280	480,000	70,000	103
\$3,380					\$20,230			\$25,102	\$3,840	\$850	104
537,072	92,580	18,534	1,217,141	800	1,008,280	90,078	900,022	210,020	605,413	1,003,020	105
\$1,321,554	\$225,000	\$47,270	\$3,193,061	\$2,400	\$2,310,104	\$237,400	\$2,070,200	\$453,045	\$1,202,243	\$2,314,364	106
	3,024,700	200,000	300,000		230,728,150		182,100,105	2,300,205	9,882,080	253,000	107
	\$41,848	\$5,408	\$5,000		\$2,551,000		\$2,147,012	\$28,044	\$118,140	\$3,202	108
45,875,814	21,103,092	0,400,503	40,421,573	13,172,270	204,838,020	51,481,702	200,735,550	138,035,732	358,002,808	38,530,801	109
\$016,700	\$233,723	\$84,403	\$001,137	\$131,320	\$2,030,807	\$477,001	\$2,050,002	\$1,410,725	\$3,100,104	\$423,283	110
101,000	10,332,000		57,362,000	28,300,748	517,084,231	28,242,000	457,805,004	101,005,307	647,285,277	228,454,827	111
\$1,350	\$160,875		\$500,382	\$223,708	\$4,544,053	\$240,005	\$4,044,428	\$1,400,111	\$4,082,886	\$2,040,200	112
\$20,008	\$100		\$05,710	\$067	\$58,554		\$177,057	\$178,830	\$37,057	\$8,025	113
40	333	3	543	204	4,008	201	4,040	2,370	3,780	3,204	114
115	78	11	280	3	200	8	453	230	182	270	115
											116
80	47	7	114	28	303	33	500	273	351	388	117
3,115	2,827	107	8,300	1,063	33,207	2,208	42,333	20,077	35,141	23,301	118
20	20	2	61	17	300	32	527	220	270	340	119
1,185	885	60	3,744	903	34,322	2,173	34,671	13,425	20,888	18,780	120
10	6	2	4		40	2	40	22	74	21	121
200	101	23	08		610	28	1,014	378	1,307	582	122
50	72	3	00	10	53	2	155	187	105	134	123
1,500	1,841	85	4,513	850	2,342	55	5,443	5,838	5,040	3,700	124
											125
											126
2			2		14	3	10	8	13	4	127
7			55		100	12	173	28	480	135	128
					6						129
					200						130
8			1	2	25		7	8	21	4	131
175			10	110	630		232	408	514	05	132
30					45						133
					101		305	200	65	10	134

TABLE 14.—FLOUR AND GRIST MILL PRODUCTS—DETAILED

		Louisiana.	Maine.	Maryland.	Massachu- setts.	Michigan.	Minnesota.
1	Number of establishments.....	3	161	202	142	405	363
2	Capital:						
3	Total.....	\$50,200	\$1,422,671	\$2,717,258	\$1,881,478	\$7,654,270	\$34,857,366
4	Land.....	\$4,000	\$109,500	\$222,186	\$148,137	\$1,120,677	\$1,546,330
5	Buildings.....	\$14,500	\$307,887	\$553,297	\$406,020	\$1,533,013	\$4,108,366
6	Machinery, tools, and implements.....	\$9,700	\$254,398	\$751,534	\$280,461	\$2,308,745	\$9,892,141
7	Cash and sundries.....	\$22,000	\$690,826	\$1,190,241	\$1,046,251	\$2,601,835	\$19,310,529
8	Proprietors and firm members.....	4	209	249	181	568	416
9	Salaried officials, clerks, etc.:						
10	Total number.....	1	28	91	41	277	836
11	Total salaries.....	\$650	\$17,574	\$72,069	\$25,472	\$232,736	\$906,274
12	Officers of corporations—						
13	Number.....		11	13	6	34	108
14	Salaries.....		\$9,223	\$17,789	\$5,750	\$49,902	\$234,821
15	General superintendents, managers, clerks, etc.—						
16	Total number.....	1	17	78	35	243	728
17	Total salaries.....	\$650	\$8,351	\$55,180	\$19,722	\$182,834	\$671,453
18	Men—						
19	Number.....	1	8	74	19	182	562
20	Salaries.....	\$650	\$5,879	\$54,068	\$13,693	\$158,832	\$574,492
21	Women—						
22	Number.....		9	4	16	61	166
23	Salaries.....		\$2,472	\$1,112	\$6,029	\$24,002	\$96,961
24	Wage-earners, including pieceworkers, and total wages:						
25	Greatest number employed at any one time during the year.....	6	293	670	325	1,800	5,506
26	Least number employed at any one time during the year.....	6	222	524	273	1,386	3,227
27	Average number.....	4	234	550	277	1,508	4,481
28	Total wages.....	\$1,734	\$108,382	\$212,332	\$154,065	\$766,690	\$2,650,818
29	Men 16 years and over—						
30	Average number.....	4	233	543	276	1,480	4,440
31	Wages.....	\$1,738	\$108,070	\$211,225	\$153,565	\$759,530	\$2,637,035
32	Women 16 years and over—						
33	Average number.....			4	1	27	38
34	Wages.....			\$667	\$500	\$6,910	\$13,166
35	Children under 16 years—						
36	Average number.....		1	3		1	3
37	Wages.....		\$312	\$440		\$250	\$617
38	Average number of wage-earners, including pieceworkers, employed during						
39	each month:						
40	Men 16 years and over—						
41	January.....	4	231	529	282	1,519	4,680
42	February.....	4	228	503	277	1,506	4,605
43	March.....	4	239	517	285	1,502	4,544
44	April.....	4	241	505	270	1,444	4,312
45	May.....	4	243	505	282	1,390	4,001
46	June.....	4	228	507	274	1,397	4,226
47	July.....	4	227	566	268	1,378	4,149
48	August.....	4	213	582	269	1,426	4,081
49	September.....	4	228	590	270	1,503	4,360
50	October.....	4	233	597	273	1,564	4,741
51	November.....	4	245	583	273	1,564	4,695
52	December.....	4	240	532	280	1,558	4,886
53	Women 16 years and over—						
54	January.....			7	1	42	42
55	February.....			5	1	42	37
56	March.....			4	1	43	36
57	April.....			4	1	44	37
58	May.....			4	1	11	35
59	June.....			4	1	10	38
60	July.....			4	1	1	38
61	August.....			4	1	1	36
62	September.....			3	1	2	37
63	October.....			3	1	44	39
64	November.....			3	1	43	41
65	December.....			3	1	41	40
66	Children under 16 years—						
67	January.....			3			3
68	February.....			3			3
69	March.....			3			3
70	April.....			3			3
71	May.....		4	3			3
72	June.....		4	3			3
73	July.....		4	3			3
74	August.....			3		2	3
75	September.....			3		2	3
76	October.....			3		2	3
77	November.....			3		2	3
78	December.....			3		2	3
79	Miscellaneous expenses:						
80	Total.....	\$2,495	\$57,941	\$238,525	\$92,080	\$541,168	\$4,471,676
81	Rent of works.....	\$600	\$8,801	\$17,160	\$22,591	\$19,737	\$65,380
82	Taxes, not including internal revenue.....	\$175	\$10,820	\$14,891	\$14,283	\$69,270	\$176,755
83	Rent of offices, interest, insurance, and all other sundry expenses	\$1,720	\$38,320	\$204,824	\$56,046	\$446,672	\$4,204,082
84	not hitherto included.						
85	Contract work.....			\$1,650	\$60	\$5,589	\$25,459
86	Materials used:						
87	Aggregate cost.....	\$53,360	\$3,442,115	\$6,209,983	\$4,112,989	\$23,414,207	\$109,060,973
88	Wheat—						
89	Bushels.....		136,230	5,110,510	37,429	19,092,087	110,046,339
90	Cost.....		\$135,156	\$4,696,624	\$39,984	\$17,047,048	\$98,671,534
91	Corn—						
92	Bushels.....	80,430	4,545,168	1,898,891	6,247,591	6,256,432	2,646,411
93	Cost.....	\$46,758	\$2,749,466	\$993,781	\$3,649,038	\$3,121,460	\$1,169,531
94	Rye—						
95	Bushels.....		3,830	87,213	80,313	922,684	977,058
96	Cost.....		\$3,496	\$56,157	\$57,874	\$502,385	\$621,886
97	Buckwheat—						
98	Bushels.....		123,876	60,319	5,753	761,313	85,225
99	Cost.....		\$54,012	\$37,341	\$3,718	\$429,668	\$49,047
100	Barley—						
101	Bushels.....		138,425	3,844	23,358	178,715	2,099,104
102	Cost.....		\$71,274	\$1,804	\$11,681	\$85,998	\$718,483
103	Oats—						
104	Bushels.....	5,555	880,238	239,944	685,348	2,680,717	4,571,448
105	Cost.....	\$2,500	\$366,561	\$90,624	\$289,787	\$1,019,649	\$1,352,464

SUMMARY, BY STATES AND TERRITORIES: 1905—Continued.

Missouri.	Montana.	Nebraska.	Nevada.	New Hampshire.	New Jersey.	New Mexico.	New York.	North Carolina.	North Dakota.	Ohio.	
582	12	234	0	72	182	13	825	234	50	604	1
\$14,834,042	\$991,191	\$9,499,878	\$411,368	\$1,008,930	\$2,907,250	\$139,420	\$24,819,316	\$1,000,340	\$2,383,673	\$14,931,065	2
\$1,124,108	\$101,020	\$925,055	\$59,490	\$114,345	\$184,100	\$9,020	\$3,505,813	\$210,895	\$105,990	\$1,224,877	3
\$2,595,715	\$254,071	\$1,537,292	\$120,500	\$184,450	\$653,950	\$29,800	\$4,408,026	\$335,279	\$450,549	\$4,542,325	4
\$3,855,708	\$168,357	\$1,071,698	\$90,840	\$121,378	\$564,329	\$62,100	\$4,082,402	\$850,864	\$644,558	\$4,800,097	5
\$7,258,511	\$408,133	\$2,362,323	\$104,628	\$588,873	\$1,300,862	\$17,900	\$12,223,075	\$578,308	\$1,170,679	\$5,273,790	6
752	6	294	8	109	221	14	1,007	370	66	1,003	7
458	36	167	6	11	48	2	520	72	76	438	8
\$457,714	\$40,748	\$153,176	\$7,500	\$8,076	\$30,000	\$1,500	\$504,451	\$40,790	\$84,015	\$422,332	9
120	1	33	2	.....	11	1	89	23	15	102	10
\$189,710	\$1,000	\$43,670	\$2,400	.....	\$14,250	\$900	\$176,420	\$10,780	\$10,780	\$105,701	11
320	35	134	4	11	37	1	431	49	61	336	12
\$208,004	\$45,748	\$109,506	\$5,040	\$8,070	\$22,449	\$900	\$418,031	\$30,010	\$65,125	\$250,631	13
281	32	117	3	8	29	.....	354	44	58	261	14
\$248,709	\$43,828	\$102,310	\$4,500	\$7,800	\$19,530	.....	\$382,722	\$28,357	\$63,623	\$227,740	15
48	3	17	1	3	8	1	77	5	3	75	16
\$10,205	\$1,920	\$7,196	\$480	\$876	\$2,010	\$900	\$35,309	\$1,653	\$1,202	\$23,891	17
3,006	75	1,071	33	100	507	37	3,780	709	383	3,188	18
1,078	05	770	15	127	442	23	2,713	495	280	2,480	19
2,345	07	803	17	128	454	29	3,003	519	312	2,700	20
\$1,000,843	\$57,000	\$408,268	\$10,098	\$63,454	\$210,689	\$14,352	\$1,553,122	\$100,320	\$200,430	\$1,330,568	21
2,333	07	821	17	128	451	20	2,906	513	312	2,606	22
\$1,087,459	\$57,000	\$452,309	\$10,098	\$63,454	\$210,133	\$14,352	\$1,531,841	\$150,630	\$200,439	\$1,312,153	23
6	.....	42	.....	.....	2	.....	07	.....	.....	91	24
\$2,196	.....	\$15,809	.....	.....	\$400	.....	\$21,281	.....	.....	\$20,923	25
0	.....	.....	.....	.....	1	.....	.....	6	.....	3	26
\$1,188	.....	.....	.....	.....	\$150	.....	.....	\$693	.....	\$402	27
2,251	04	820	12	134	459	26	3,011	498	313	2,507	28
2,222	03	827	12	136	454	26	3,043	494	315	2,612	29
2,350	04	837	12	140	448	25	3,151	492	309	2,501	30
2,104	06	810	14	130	430	28	3,083	490	275	2,579	31
2,010	05	785	14	132	444	27	2,900	503	282	2,522	32
2,055	05	774	15	130	446	27	2,854	514	286	2,485	33
2,328	06	782	15	118	450	28	2,800	518	279	2,525	34
2,550	05	797	21	117	451	30	2,889	534	275	2,629	35
2,500	73	847	26	117	455	37	2,831	538	335	2,605	36
2,500	73	872	26	122	456	33	2,070	534	300	2,008	37
2,400	73	873	19	124	452	29	3,030	520	308	2,086	38
2,387	07	828	18	127	461	32	2,904	515	350	2,050	39
8	.....	32	.....	.....	2	.....	75	.....	.....	75	40
8	.....	37	.....	.....	2	.....	70	.....	.....	77	41
0	.....	45	.....	.....	2	.....	88	.....	.....	84	42
0	.....	28	.....	.....	2	.....	76	.....	.....	75	43
5	.....	33	.....	.....	2	.....	74	.....	.....	79	44
5	.....	15	.....	.....	2	.....	79	.....	.....	73	45
4	.....	33	.....	.....	2	.....	83	.....	.....	76	46
4	.....	0	.....	.....	2	.....	82	.....	.....	91	47
5	.....	78	.....	.....	2	.....	133	.....	.....	139	48
7	.....	17	.....	.....	2	.....	152	.....	.....	107	49
7	.....	51	.....	.....	2	.....	129	.....	.....	128	50
7	.....	61	.....	.....	2	.....	123	.....	.....	88	51
0	.....	.....	.....	.....	1	.....	.....	5	.....	3	52
0	.....	.....	.....	.....	1	.....	.....	5	.....	3	53
0	.....	.....	.....	.....	1	.....	.....	5	.....	3	54
0	.....	.....	.....	.....	1	.....	.....	4	.....	3	55
5	.....	.....	.....	.....	1	.....	.....	5	.....	3	56
4	.....	.....	.....	.....	1	.....	.....	5	.....	3	57
4	.....	.....	.....	.....	1	.....	.....	7	.....	3	58
0	.....	.....	.....	.....	1	.....	.....	8	.....	3	59
7	.....	.....	.....	.....	1	.....	.....	7	.....	3	60
7	.....	.....	.....	.....	1	.....	.....	7	.....	3	61
8	.....	.....	.....	.....	1	.....	.....	7	.....	3	62
7	.....	.....	.....	.....	1	.....	.....	7	.....	3	63
\$900,217	\$88,552	\$300,587	\$20,333	\$35,100	\$144,522	\$6,384	\$1,720,038	\$98,822	\$214,010	\$992,025	64
\$31,677	.....	\$9,330	\$546	\$9,055	\$14,845	\$1,080	\$90,030	\$5,737	\$590	\$33,452	65
\$90,049	\$0,307	\$13,800	\$1,020	\$0,542	\$14,048	\$1,020	\$111,200	\$11,522	\$14,020	\$112,203	66
\$948,392	\$32,245	\$348,748	\$18,158	\$21,772	\$113,879	\$3,375	\$1,510,053	\$81,503	\$100,400	\$830,227	67
\$20,150	.....	.....	.....	\$137	\$1,150	.....	\$250	.....	.....	\$10,743	68
\$32,027,827	\$1,502,385	\$10,153,420	\$431,817	\$2,348,392	\$4,521,713	\$311,857	\$47,372,493	\$5,085,802	\$5,402,541	\$35,020,232	69
20,507,080	1,402,970	8,058,038	237,190	382,785	1,711,041	250,676	26,030,183	3,453,790	5,894,493	27,010,184	70
\$20,809,942	\$1,410,001	\$9,065,704	\$228,940	\$458,590	\$1,717,855	\$239,490	\$20,508,780	\$3,780,471	\$4,880,106	\$27,398,092	71
8,013,960	3,117	4,043,455	7,369	2,807,347	3,623,400	73,777	10,747,950	2,006,052	4,300	10,443,396	72
\$8,015,528	\$1,000	\$1,845,610	\$4,090	\$1,041,102	\$2,014,032	\$40,007	\$11,030,517	\$1,825,724	\$2,150	\$5,027,378	73
49,853	1,000	375,093	1,432	20,081	306,105	.....	2,100,053	59,037	300	281,450	74
\$28,772	\$650	\$203,400	\$933	\$12,300	\$250,878	.....	\$1,408,573	\$43,025	\$210	\$103,211	75
7,501	.....	7,330	.....	.....	141,757	.....	.....	.....	.....	133,280	76
\$6,742	.....	\$5,108	.....	.....	\$86,254	10	2,308,354	12,850	.....	\$80,706	77
31,400	12,320	140,304	270,593	10,300	17,850	350	450,524	1,100	204,700	307,004	78
\$13,207	\$6,123	\$45,324	\$156,001	\$5,614	\$5,000	\$357	\$228,920	\$850	\$87,041	\$156,800	79
851,986	90,000	984,210	65,201	424,800	677,347	1,240	9,071,840	50,258	204,413	3,042,451	80
\$114,932	\$23,000	\$345,378	\$30,183	\$182,001	\$271,082	\$620	\$3,841,047	\$26,353	\$70,015	\$1,037,117	81

TABLE 14.—FLOUR AND GRIST MILL PRODUCTS—DETAILED

		Louisiana.	Maine.	Maryland.	Massachu- setts.	Michigan.	Minnesota.
	Materials used—Continued.						
	Aggregate cost—Continued.						
82	Other grains—						
83	Bushels.....		4,000	2,350	8,510	24,261	73,512
84	Cost.....		\$3,000	\$1,210	\$3,890	\$11,517	\$25,507
85	Barrels (purchased).....		\$170	\$92,569	\$1,701	\$215,237	\$1,432,634
86	Sacks (purchased).....	\$3,100	\$15,650	\$103,466	\$7,409	\$473,342	\$3,174,268
87	Cooperage stock and cloth and paper for sacks.....		\$239	\$24,100	\$240	\$77,206	\$122,978
88	Fuel.....	\$450	\$12,391	\$65,701	\$24,865	\$241,933	\$933,435
89	Rent of power and heat.....	\$360	\$11,086	\$3,895	\$5,159	\$6,203	\$14,814
90	Mill supplies.....	\$192	\$3,040	\$20,041	\$4,102	\$35,973	\$124,864
91	All other materials.....		\$9,517	\$9,775	\$9,673	\$37,664	\$106,522
	Freight.....		\$7,057	\$12,895	\$3,898	\$108,874	\$553,006
92	Products:						
	Aggregate value.....	\$65,762	\$3,932,882	\$7,318,212	\$4,618,313	\$26,512,027	\$122,059,123
93	Wheat flour—						
94	Total barrels.....		24,917	1,015,952	8,435	3,901,219	23,871,227
	Total value.....		\$147,905	\$4,860,634	\$46,994	\$17,155,090	\$103,401,447
	White—						
95	Barrels.....		24,485	1,015,866	250	3,860,809	23,839,717
96	Value.....		\$145,829	\$4,860,290	\$1,400	\$16,987,310	\$103,254,958
97	Graham—						
98	Barrels.....		432	86	8,185	40,410	31,510
	Value.....		\$2,076	\$344	\$45,594	\$167,780	\$146,489
99	Rye flour—						
100	Barrels.....		658	2,858	2,037	61,842	132,671
	Value.....		\$3,518	\$14,463	\$9,183	\$219,597	\$543,505
101	Buckwheat flour—						
102	Pounds.....		1,692,868	1,642,766	108,450	21,930,856	2,247,420
	Value.....		\$39,933	\$45,109	\$4,555	\$524,429	\$62,513
103	Barley meal—						
104	Pounds.....		188,470		60,800	205,770	160,000
	Value.....		\$3,050		\$811	\$2,411	\$3,200
105	Corn meal and corn flour—						
106	Barrels.....		960,416	298,196	1,383,547	210,116	66,018
	Value.....		\$2,377,373	\$722,991	\$3,411,109	\$506,615	\$154,243
107	Hominy and grits—						
108	Pounds.....		2,010,000	3,011,460	750,000	43,802	891,161
	Value.....		\$29,040	\$41,861	\$13,500	\$1,075	\$13,353
109	Feed—						
110	Pounds.....	4,676,000	96,718,070	50,771,168	91,040,672	425,150,358	396,434,977
	Value.....	\$65,762	\$1,251,110	\$649,773	\$1,111,856	\$4,535,938	\$3,721,948
111	Offal—						
112	Pounds.....		5,128,816	91,073,417	385,950	383,659,035	1,867,050,866
113	Value.....		\$60,401	\$947,858	\$4,150	\$3,314,293	\$13,967,200
	All other products.....		\$20,552	\$35,523	\$16,155	\$252,579	\$191,714
114	Machinery and capacity:						
115	Pairs of rolls, number.....	2	341	1,456	88	3,823	7,333
116	Runs of stone, number.....	2	199	297	215	406	187
	Estimated maximum capacity per day of twenty-four hours, barrels.....						
117	Power:						
118	Number of establishments reporting.....	3	153	201	140	405	363
	Total horsepower.....	140	6,603	10,663	9,363	35,197	86,517
	Owned—						
	Engines—						
119	Steam—						
120	Number.....	2	28	90	42	250	314
	Horsepower.....	115	950	5,324	2,498	17,928	52,082
121	Gas or gasoline—						
122	Number.....		36	24	20	39	48
	Horsepower.....		731	467	536	981	953
123	Water wheels—						
124	Number.....		135	198	119	396	184
	Horsepower.....		4,094	4,622	5,949	15,351	32,629
125	Water motors—						
126	Number.....		1	1	2		
	Horsepower.....		20	30	7		
127	Electric motors—						
128	Number.....					10	38
	Horsepower.....					442	424
129	Other power—						
130	Number.....			1	1		
	Horsepower.....			45	22		
	Rented—						
131	Electric motors—						
132	Number.....	1	24	4	12	16	9
133	Horsepower.....	25	748	135	290	450	400
134	Other kind, horsepower.....		60	40	61	45	29
	Furnished to other establishments, horsepower.....		35		98	47	

FLOUR AND GRIST MILL PRODUCTS.

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SUMMARY, BY STATES AND TERRITORIES: 1905 -Continued.

Missouri.	Montana.	Nebraska.	Nevada.	New Hampshire.	New Jersey.	New Mexico.	New York.	North Carolina.	North Dakota.	Ohio.	
32,050		13,600		300	33,070		21,033	15,070	10,000	44,150	82
\$12,157		\$4,085		\$175	\$14,509		\$10,086	\$10,406	\$3,225	\$25,702	83
\$200,764	\$0	\$7,149		\$750	\$19,739		\$613,822	\$558	\$2,020	\$237,400	84
\$1,037,951	\$71,546	\$444,091	\$8,431	\$10,286	\$59,646	\$10,061	\$625,730	\$143,020	\$188,051	\$635,710	85
\$230,027		\$5,956		\$20,000	\$3,465		\$42,806	\$180	\$30,577	\$130,118	86
\$451,406	\$11,829	\$183,265	\$1,205	\$4,046	\$24,510	\$7,152	\$305,008	\$93,208	\$124,541	\$374,103	87
\$1,103	\$1,800	\$2,330	\$000	\$2,722	\$2,555	\$1,320	\$41,030	\$3,740		\$5,856	88
\$65,821	\$6,070	\$17,330	\$240	\$2,050	\$6,149	\$886	\$103,443	\$9,372	\$8,708	\$48,070	89
\$51,086		\$68,575	\$285	\$4,059	\$8,454	\$1,205	\$600,524	\$20,240	\$5,085	\$171,805	90
\$188,000	\$50,301	\$18,430		\$3,200	\$27,076	\$243	\$127,408	\$11,106	\$40,292	\$124,055	91
\$38,020,142	\$2,003,136	\$12,100,303	\$520,060	\$2,541,775	\$5,408,013	\$388,124	\$54,546,435	\$0,803,770	\$0,463,228	\$40,855,506	92
0,175,541	297,800	1,730,008	47,450	76,041	354,231	51,008	5,078,743	713,400	1,223,210	5,028,170	93
\$28,512,755	\$1,723,722	\$7,030,735	\$250,078	\$450,148	\$1,012,982	\$208,111	\$28,177,883	\$3,810,448	\$5,513,554	\$27,850,003	94
0,171,011	297,790	1,730,408	47,180	75,080	353,270	51,008	5,037,588	713,379	1,221,410	5,000,455	95
\$28,402,092	\$1,723,072	\$7,897,128	\$255,508	\$451,700	\$1,008,055	\$207,811	\$27,003,201	\$3,810,342	\$5,504,935	\$27,704,108	96
4,530	10	0,530	270	1,201	001	60	41,155	21	1,803	21,721	97
\$20,063	\$50	\$42,007	\$1,380	\$7,358	\$4,327	\$300	\$184,592	\$100	\$0,610	\$02,405	98
1,843	145	51,050		1,800	28,101		332,719	1,072	50	43,001	99
\$5,477	\$616	\$108,749		\$6,303	\$103,871		\$1,424,315	\$0,146	\$300	\$181,105	100
250,700		224,000			3,704,700	300	66,234,003	132,448		3,500,018	101
\$0,113		\$7,276			\$08,043	\$15	\$1,030,873	\$3,072		\$03,907	102
208,000	0,100			275,200	87,000		7,005,060	48,000		5,231,400	103
\$1,020	\$175			\$4,504	\$1,008		\$06,844	\$050		\$82,130	104
935,318	082	542,000		074,102	244,173	4,505	3,004,226	648,481		1,000,703	105
\$2,343,395	\$2,511	\$1,133,437		\$1,690,980	\$034,727	\$15,000	\$6,028,206	\$1,738,154		\$2,432,020	106
58,814,007		8,528,040		500	1,401,200		82,614,004	8,070,400	22,008	00,300,268	107
\$613,053		\$03,824		\$10	\$20,317		\$857,057	\$134,718	\$417	\$000,171	108
187,130,100	2,505,302	104,777,101	15,540,700	32,300,200	186,550,200	3,270,000	803,455,081	33,123,725	22,440,000	406,557,045	109
\$1,776,420	\$31,077	\$1,200,077	\$215,157	\$384,184	\$2,308,037	\$40,179	\$10,354,492	\$400,620	\$180,230	\$4,151,804	110
548,018,750	28,402,300	173,440,004	4,780,438	7,630,000	33,807,248	4,827,000	440,750,271	64,485,430	105,807,004	533,453,403	111
\$4,751,581	\$244,435	\$1,200,205	\$48,059	\$81,228	\$388,108	\$55,813	\$4,210,280	\$720,106	\$755,840	\$4,821,108	112
\$8,810		\$317,100	\$175	\$15,250	\$32,200		\$350,585	\$34,050	\$3,881	\$537,592	113
5,408	145	2,208	00	71	087	05	4,200	1,300	040	0,451	114
303		00		109	302	13	1,320	400	4	800,558	115
582	12	232	0	72	180	13	822	234	50	004	117
40,510	1,455	18,055	301	4,523	0,012	300	08,522	10,350	5,777	54,240	118
500	7	120	3	16	55	7	326	154	57	500	119
\$0,102	505	10,153	50	000	2,501	257	20,242	0,282	5,254	42,238	120
34		17		2	24		130		10	40	121
078		474		36	073		4,144		108	1,051	122
132	17	153	7	111	233	5	1,104	208	6	200	123
3,300	710	7,000	282	3,526	6,461	112	35,510	4,040	318	0,501	124
1		3								1	125
35		00								5	126
21		7					15		3	14	127
245		104					501		7	300	128
					1		2	1			129
					17		02	2			130
3	1	3	1	7	1	1	55	1		4	131
45	150	105	20	272	20	30	1,024	35		05	132
63		343		80	50		130				133
				80	26		282				134

TABLE 14.—FLOUR AND GRIST MILL PRODUCTS--DETAILED

	Oklahoma.	Oregon.	Pennsylvania.	Rhode Island.	South Carolina.
1 Number of establishments.....	75	105	1,195	22	29
2 Capital:					
3 Total.....	\$3,242,032	\$3,997,069	\$18,765,691	\$389,479	\$205,619
4 Land.....	\$143,461	\$401,586	\$2,114,559	\$33,900	\$16,682
5 Buildings.....	\$385,750	\$704,098	\$4,249,736	\$101,290	\$46,321
6 Machinery, tools, and implements.....	\$843,657	\$733,286	\$4,243,562	\$80,868	\$92,618
7 Cash and sundries.....	\$1,669,184	\$1,898,089	\$8,157,834	\$173,421	\$49,998
8 Proprietors and firm members.....	56	101	1,558	23	29
9 Salaried officials, clerks, etc.:					
10 Total number.....	153	85	306	15	14
11 Total salaries.....	\$146,043	\$106,666	\$237,394	\$7,450	\$7,494
12 Officers of corporations—					
13 Number.....	54	20	51	2	3
14 Salaries.....	\$60,130	\$36,785	\$55,147	\$600	\$2,160
15 General superintendents, managers, clerks, etc.—					
16 Total number.....	99	65	255	13	11
17 Total salaries.....	\$85,913	\$69,881	\$182,247	\$6,850	\$5,334
18 Men—					
19 Number.....	95	57	188	11	11
20 Salaries.....	\$83,633	\$63,673	\$153,873	\$6,182	\$5,334
21 Women—					
22 Number.....	4	8	67	2	
23 Salaries.....	\$2,280	\$6,208	\$28,374	\$668	
24 Wage-earners, including pieceworkers, and total wages:					
25 Greatest number employed at any one time during the year.....	561	584	2,076	48	85
26 Least number employed at any one time during the year.....	360	299	2,572	46	49
27 Average number.....	456	395	2,632	45	60
28 Total wages.....	\$253,256	\$271,183	\$1,246,835	\$23,771	\$18,414
29 Men 16 years and over—					
30 Average number.....	456	395	2,613	44	60
31 Wages.....	\$253,256	\$271,183	\$1,243,120	\$23,621	\$18,414
32 Women 16 years and over—					
33 Average number.....			6	1	
34 Wages.....			\$1,609	\$150	
35 Children under 16 years—					
36 Average number.....			13		
37 Wages.....			\$2,106		
38 Average number of wage-earners, including pieceworkers, employed during each month:					
39 Men 16 years and over—					
40 January.....	466	379	2,602	46	49
41 February.....	467	352	2,581	46	49
42 March.....	457	349	2,599	44	50
43 April.....	444	362	2,571	43	51
44 May.....	416	334	2,531	43	50
45 June.....	406	348	2,491	43	53
46 July.....	447	362	2,514	44	70
47 August.....	469	413	2,545	44	74
48 September.....	483	485	2,680	44	74
49 October.....	486	477	2,754	43	69
50 November.....	460	432	2,743	43	66
51 December.....	462	447	2,745	45	65
52 Women 16 years and over—					
53 January.....			6	1	
54 February.....			6	1	
55 March.....			6	1	
56 April.....			6	1	
57 May.....			6	1	
58 June.....			6	1	
59 July.....			6	1	
60 August.....			6	1	
61 September.....			6	1	
62 October.....			6	1	
63 November.....			6	1	
64 December.....			6	1	
65 Children under 16 years—					
66 January.....			13		
67 February.....			13		
68 March.....			13		
69 April.....			13		
70 May.....			13		
71 June.....			13		
72 July.....			13		
73 August.....			13		
74 September.....			13		
75 October.....			13		
76 November.....			13		
77 December.....			13		
78 Miscellaneous expenses:					
79 Total.....	\$239,532	\$235,836	\$927,480	\$13,357	\$7,708
80 Rent of works.....	\$1,810	\$2,741	\$114,465	\$2,760	\$445
81 Taxes.....	\$21,429	\$27,089	\$75,394	\$1,014	\$1,729
82 Rent of offices, interest, insurance, and all other sundry expenses not hitherto included.....	\$216,293	\$206,006	\$734,584	\$9,583	\$5,534
83 Contract work.....			\$3,037		
84 Materials used:					
85 Aggregate cost.....	\$8,030,939	\$7,352,430	\$33,204,512	\$1,059,438	\$633,294
86 Wheat—					
87 Bushels.....	7,557,640	8,059,304	19,207,373	1,970	258,438
88 Cost.....	\$6,521,893	\$6,223,471	\$19,455,445	\$1,797	\$279,874
89 Corn—					
90 Bushels.....	2,206,932	27,279	14,658,274	1,590,601	483,062
91 Cost.....	\$885,218	\$17,369	\$8,109,064	\$826,905	\$321,069
92 Rye—					
93 Bushels.....	2,625	8,193	1,458,578	6,800	50
94 Cost.....	\$1,854	\$5,275	\$1,026,846	\$5,032	\$35
95 Buckwheat—					
96 Bushels.....		360	1,744,335		50
97 Cost.....		\$287	\$1,022,238		\$50
98 Barley—					
99 Bushels.....	625	1,079,667	181,004	24,050	
100 Cost.....	\$500	\$531,398	\$60,815	\$10,780	
101 Oats—					
102 Bushels.....	500	319,760	5,635,097	240,634	3,400
103 Cost.....	\$150	\$125,553	\$2,122,493	\$95,673	\$1,037

¹In order to avoid the disclosure of the operations of individual establishments in certain particulars, 7 establishments in the District of Columbia and 9 in Mississippi are combined under "all other states."

FLOUR AND GRIST MILL PRODUCTS.

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SUMMARY, BY STATES AND TERRITORIES: 1905--Continued.

South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.	All other states. ¹	
96	387	154	63	100	365	76	194	389	11	16	1
\$2,427,556	\$6,927,155	\$7,785,330	\$1,212,430	\$1,310,735	\$5,503,101	\$6,400,492	\$2,022,906	\$10,545,861	\$222,440	\$263,353	2
\$116,055	\$485,070	\$380,005	\$130,940	\$187,225	\$554,217	\$558,575	\$230,875	\$1,111,630	\$27,400	\$57,225	3
\$480,805	\$1,104,800	\$1,521,603	\$249,511	\$289,600	\$1,188,133	\$885,211	\$534,505	\$2,148,165	\$43,347	\$69,450	4
\$820,391	\$2,178,041	\$1,991,653	\$421,461	\$199,020	\$1,574,704	\$1,004,080	\$761,555	\$2,003,010	\$60,770	\$45,350	5
\$1,003,715	\$3,158,320	\$3,885,088	\$401,527	\$643,890	\$2,180,047	\$4,042,040	\$1,089,971	\$4,023,056	\$84,917	\$91,328	6
110	584	152	80	139	498	50	301	511	9	21	7
04	250	292	48	14	142	171	70	234	6	13	8
\$57,338	\$212,004	\$340,600	\$27,150	\$10,058	\$104,720	\$211,840	\$65,777	\$252,086	\$5,305	\$12,772	9
25	40	44	17	5	21	37	14	55	-----	2	10
\$26,305	\$57,445	\$94,967	\$5,980	\$0,500	\$18,355	\$67,210	\$11,030	\$72,000	-----	\$6,800	11
30	210	248	31	9	121	134	65	170	0	170	12
\$30,943	\$154,049	\$251,729	\$21,170	\$4,158	\$80,371	\$144,030	\$54,147	\$180,386	\$5,305	\$5,972	13
32	191	244	30	5	108	126	58	147	6	10	14
\$27,743	\$147,317	\$249,415	\$20,090	\$2,040	\$82,705	\$140,040	\$51,007	\$164,908	\$5,305	\$5,372	15
7	10	4	1	4	15	8	7	32	-----	1	16
\$3,200	\$7,332	\$2,314	\$480	\$1,218	\$3,006	\$3,000	\$3,080	\$15,418	-----	\$600	17
300	1,008	1,210	182	225	1,000	858	488	1,635	25	08	18
315	1,308	855	142	116	802	400	373	1,169	19	84	19
347	1,505	980	150	185	957	613	400	1,351	16	81	20
\$203,102	\$501,040	\$527,652	\$91,461	\$91,464	\$348,081	\$409,828	\$183,050	\$719,682	\$11,258	\$37,042	21
346	1,580	985	148	183	951	607	399	1,344	16	81	22
\$202,502	\$588,750	\$527,502	\$90,010	\$90,554	\$347,831	\$407,399	\$182,790	\$717,700	\$11,258	\$37,042	23
1	1	-----	1	2	-----	4	-----	3	-----	-----	24
\$600	\$300	-----	\$400	\$910	-----	\$2,080	-----	\$1,180	-----	-----	25
-----	14	1	1	-----	6	2	1	4	-----	-----	26
-----	\$1,000	\$150	\$145	-----	\$850	\$340	\$260	\$712	-----	-----	27
355	1,594	1,017	145	192	908	604	306	1,388	18	86	28
348	1,583	1,000	142	180	800	614	386	1,360	18	85	29
336	1,540	906	140	195	916	585	384	1,418	17	84	30
326	1,403	914	138	187	910	569	379	1,275	12	84	31
324	1,522	888	130	180	915	573	384	1,268	12	84	32
324	1,400	888	128	160	921	500	377	1,302	11	86	33
331	1,650	989	136	170	980	523	386	1,286	10	82	34
337	1,000	1,014	152	171	1,000	573	419	1,263	12	80	35
350	1,030	1,020	163	172	1,008	708	431	1,378	10	82	36
373	1,638	1,048	168	182	997	728	423	1,388	20	77	37
375	1,603	1,040	167	195	980	605	420	1,405	23	72	38
373	1,555	1,024	158	194	981	643	403	1,301	20	70	39
1	1	-----	1	2	-----	2	-----	3	-----	-----	40
1	1	-----	1	2	-----	2	-----	3	-----	-----	41
1	1	-----	1	2	-----	4	-----	3	-----	-----	42
1	1	-----	1	2	-----	4	-----	3	-----	-----	43
1	1	-----	1	2	-----	4	-----	3	-----	-----	44
1	1	-----	1	2	-----	4	-----	3	-----	-----	45
1	1	-----	1	2	-----	4	-----	3	-----	-----	46
1	1	-----	1	2	-----	4	-----	3	-----	-----	47
1	1	-----	1	2	-----	4	-----	3	-----	-----	48
1	1	-----	1	2	-----	4	-----	3	-----	-----	49
1	1	-----	1	2	-----	4	-----	3	-----	-----	50
1	1	-----	1	2	-----	4	-----	3	-----	-----	51
-----	14	1	2	-----	4	2	1	4	-----	-----	52
-----	14	1	-----	-----	5	1	-----	-----	-----	-----	53
-----	14	1	-----	-----	6	2	1	4	-----	-----	54
-----	14	1	-----	-----	6	1	1	4	-----	-----	55
-----	14	1	-----	-----	6	1	1	4	-----	-----	56
-----	14	1	-----	-----	6	1	1	4	-----	-----	57
-----	14	1	-----	-----	8	2	1	4	-----	-----	58
-----	14	1	-----	-----	8	4	1	4	-----	-----	59
-----	14	1	-----	-----	7	2	1	4	-----	-----	60
-----	14	1	3	-----	6	2	1	4	-----	-----	61
-----	14	1	4	-----	5	2	1	4	-----	-----	62
-----	14	1	3	-----	5	2	1	4	-----	-----	63
\$204,240	\$488,700	\$810,008	\$58,147	\$54,155	\$223,100	\$406,378	\$116,063	\$784,055	\$13,240	\$16,480	64
\$6,318	\$5,150	\$3,415	\$3,400	\$5,700	\$17,071	\$20,318	\$3,030	\$25,005	\$500	\$3,100	65
\$17,731	\$37,403	\$48,867	\$9,000	\$7,317	\$23,423	\$40,791	\$15,713	\$72,960	\$1,414	\$1,586	66
\$177,180	\$440,091	\$757,776	\$45,030	\$41,039	\$182,476	\$403,599	\$97,311	\$685,140	\$11,320	\$11,803	67
\$3,020	\$80	\$5,040	-----	-----	\$220	\$1,700	-----	\$950	-----	-----	68
\$5,357,705	\$21,012,157	\$18,002,755	\$2,043,054	\$2,872,445	\$12,170,020	\$12,771,300	\$5,213,205	\$24,756,140	\$210,155	\$602,814	69
5,705,270	15,144,000	15,305,008	2,251,610	15,020	8,580,439	13,887,102	3,039,288	17,800,000	222,478	307,000	70
\$4,715,970	\$15,057,858	\$15,333,780	\$1,892,085	\$15,378	\$8,080,548	\$10,743,311	\$3,107,059	\$10,781,901	\$192,232	\$331,500	71
285,524	0,062,184	4,182,282	35,280	4,118,390	5,080,207	200,001	2,791,870	3,430,171	18,015	543,118	72
\$107,280	\$4,801,171	\$2,177,080	\$21,703	\$2,401,430	\$2,700,322	\$105,285	\$1,540,151	\$1,502,454	\$11,000	\$205,000	73
42,000	7,552	6,221	18,733	3,485	105,020	48,400	60,500	3,280,301	200	5,000	74
\$22,400	\$4,208	\$5,005	\$11,611	\$2,552	\$62,031	\$30,322	\$40,501	\$2,217,075	\$120	\$3,000	75
920	4,050	-----	-----	12,500	23,182	-----	63,885	588,780	-----	-----	76
\$600	\$2,575	-----	-----	\$0,030	\$12,303	-----	\$59,158	\$373,070	-----	-----	77
256,508	8,225	6,301	76,742	121,024	18,537	1,325,825	3,400	1,767,172	700	-----	78
\$80,335	\$3,971	\$2,806	\$42,170	\$61,383	\$9,192	\$620,334	\$1,704	\$701,486	\$450	-----	79
238,205	10,000	127,000	5,700	888,752	91,720	1,055,204	480,607	6,213,840	400	4,500	80
\$70,717	\$3,680	\$51,000	\$2,536	\$360,070	\$35,172	\$373,017	\$173,016	\$1,806,783	\$100	\$1,804	81

TABLE 14.—FLOUR AND GRIST MILL PRODUCTS—DETAILED

	Oklahoma.	Oregon.	Pennsylvania.	Rhode Island.	South Carolina.
Materials used—Continued.					
Aggregate cost—Continued.					
Other grains—					
82 Bushels.....	2,500	700	29,982	.....	100
83 Cost.....	\$875	\$200	\$15,458	.....	\$100
84 Barrels (purchased).....	\$2,665	.....	\$305,395	\$150	\$10
85 Sacks (purchased).....	\$398,328	\$357,379	\$485,976	\$3,741	\$17,291
86 Cooperage stock and cloth and paper for sacks.....	\$7,000	.....	\$47,159	.....	.....
87 Fuel.....	\$112,769	\$29,631	\$233,217	\$8,715	\$11,025
88 Rent of power and heat.....	\$5,900	\$29,030	\$8,407	\$800	\$1,325
89 Mill supplies.....	\$9,268	\$7,706	\$38,882	\$617	\$799
90 All other materials.....	\$2,600	\$22,296	\$42,117	\$50	\$132
91 Freight.....	\$81,829	\$2,835	\$201,000	\$105,138	\$547
Products:					
92 Aggregate value.....	\$9,436,266	\$8,467,613	\$38,518,702	\$1,134,092	\$725,222
Wheat flour—					
93 Total barrels.....	1,635,257	1,740,849	3,969,229	339	53,150
94 Total value.....	\$7,269,308	\$6,324,932	\$19,844,069	\$2,093	\$292,490
White—					
95 Barrels.....	1,632,967	1,716,833	3,952,446	10	53,100
96 Value.....	\$7,258,828	\$6,236,291	\$19,764,264	\$60	\$292,278
Graham—					
97 Barrels.....	2,200	24,016	16,783	329	50
98 Value.....	\$10,540	\$88,641	\$79,805	\$2,033	\$212
Rye flour—					
99 Barrels.....	458	285	128,506	1,760	.....
100 Value.....	\$2,152	\$1,300	\$536,576	\$5,531	.....
Buckwheat flour—					
101 Pounds.....	.....	11,600	45,117,852	.....	1,600
102 Value.....	.....	\$385	\$1,075,989	.....	\$60
Barley meal—					
103 Pounds.....	.....	2,693,000	331,600	327,000	.....
104 Value.....	.....	\$32,750	\$4,106	\$3,280	.....
Corn meal and corn flour—					
105 Barrels.....	109,545	685	1,097,993	397,917	113,622
106 Value.....	\$260,407	\$3,395	\$2,691,670	\$622,280	\$314,257
Hominy and grits—					
107 Pounds.....	.....	225,651	33,938,974	.....	2,336,100
108 Value.....	.....	\$4,515	\$411,579	.....	\$32,329
Feed—					
109 Pounds.....	101,638,337	64,541,124	826,493,535	18,163,488	2,200,975
110 Value.....	\$920,520	\$813,442	\$9,990,426	\$200,908	\$32,392
Offal—					
111 Pounds.....	128,703,339	132,954,191	371,285,494	.....	5,044,116
112 Value.....	\$982,637	\$1,247,728	\$3,774,327	.....	\$53,134
113 All other products.....	\$1,182	\$39,166	\$189,960	.....	\$560
Machinery and capacity:					
114 Pairs of rolls, number.....	872	941	6,630	18	157
115 Runs of stone, number.....	16	55	1,868	30	42
116 Estimated maximum capacity per day of twenty-four hours, barrels.....	.....	.....	.....	.....	.....
Power:					
117 Number of establishments reporting.....	73	105	1,188	22	29
118 Total horsepower.....	6,768	10,013	61,686	1,310	1,440
Owned—					
Engines—					
Steam—					
119 Number.....	66	43	553	11	17
120 Horsepower.....	6,219	2,334	26,865	798	785
Gas or gasoline—					
121 Number.....	22	3	175	1	.....
122 Horsepower.....	283	36	4,880	12	.....
Water wheels—					
123 Number.....	1	94	1,288	10	17
124 Horsepower.....	50	6,355	29,212	430	550
Water motors—					
125 Number.....	.....	.....	.....	.....	.....
126 Horsepower.....	.....	.....	.....	.....	.....
Electric motors—					
127 Number.....	2	2	11	.....	.....
128 Horsepower.....	11	20	148	.....	.....
Other power—					
129 Number.....	.....	.....	.....	1	.....
130 Horsepower.....	.....	.....	.....	40	.....
Rented—					
Electric motors—					
131 Number.....	3	15	19	1	3
132 Horsepower.....	105	1,268	494	30	105
133 Other kind, horsepower.....	100	.....	87	.....	.....
134 Furnished to other establishments, horsepower.....	1,157	32

FLOUR AND GRIST MILL PRODUCTS.

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SUMMARY, BY STATES AND TERRITORIES: 1905--Continued.

South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.	All other states.	
21,739	1,050	21,500		1,200	3,025	132	1,000	20,065			82
\$0,150	\$430	\$0,200		\$000	\$1,817	\$63	\$000	\$17,000			83
\$3,426	\$172,091	\$79,882		\$80	\$79,805		\$25,411	\$250,872		\$13,575	84
\$192,584	\$708,034	\$820,040	\$55,641	\$3,520	\$320,480	\$580,033	\$90,506	\$483,322	\$10,408	\$0,300	85
\$2,773	\$78,887	\$15,068	\$3,000	\$255	\$27,861	\$080	\$11,778	\$7,230			86
\$132,106	\$170,555	\$239,941	\$5,957	\$8,416	\$65,651	\$75,132	\$46,050	\$234,956	\$2,365	\$4,108	87
\$60	\$360	\$6,925	\$6,159	\$1,060	\$11,408	\$49,024		\$4,321		\$580	88
\$0,465	\$20,043	\$39,903	\$2,002	\$3,274	\$12,706	\$16,040	\$0,018	\$27,554	\$330	\$1,335	89
\$5,438	\$12,002	\$4,413	\$275	\$5,686	\$21,472	\$21,065	\$4,108	\$35,808		\$250	90
\$8,302	\$200,612	\$184,808	\$249	\$1,793	\$51,171	\$81,784	\$3,000	\$63,008	\$2,000	\$1,372	91
\$0,510,364	\$25,350,768	\$22,083,130	\$2,425,791	\$3,206,075	\$13,832,200	\$14,063,612	\$6,200,291	\$28,352,237	\$283,653	\$700,288	92
1,148,024	3,180,677	3,228,380	453,804	3,026	1,777,169	3,024,287	626,670	3,744,373	43,758	73,400	93
\$5,383,370	\$17,024,123	\$16,491,820	\$1,963,322	\$14,664	\$8,855,726	\$11,154,330	\$3,380,156	\$17,611,000	\$226,754	\$350,375	94
1,142,805	3,184,847	3,223,300	449,779	2,007	1,776,312	2,078,264	625,866	3,726,363	43,708	73,400	95
\$5,300,128	\$17,015,408	\$16,466,591	\$1,946,384	\$10,240	\$8,851,839	\$10,959,241	\$3,387,142	\$17,531,813	\$226,604	\$350,375	96
5,219	1,830	4,990	4,025	1,019	857	40,023	804	18,010	50		97
\$23,242	\$8,715	\$25,229	\$16,938	\$4,424	\$3,887	\$195,089	\$3,014	\$79,106	\$150		98
2,835	40	540	546	305	2,477	1,115	58	547,007		625	99
\$11,414	\$160	\$2,060	\$2,232	\$1,594	\$6,806	\$4,670	\$234	\$1,900,327		\$2,500	100
26,000	103,000			196,350	564,320		2,213,010	15,980,819			101
\$1,010	\$2,830			\$5,825	\$14,336		\$61,138	\$416,517			102
40,000	130,000		14,000	1,100,000	150,400	7,164,000		3,430,000			103
\$700	\$1,948		\$300	\$2,212	\$2,212	\$87,795		\$38,110			104
23,308	2,052,705	599,375	1,057	900,700	1,218,204	7,625	339,872	95,801	74	126,544	105
\$40,571	\$4,771,722	\$1,477,014	\$5,316	\$2,100,276	\$2,844,946	\$21,034	\$841,827	\$246,651	\$204	\$293,981	106
	36,000,400	128,000	11,000	1,041,360	2,013,360	27,680	2,172,000	56,900		95,000	107
	\$421,200	\$1,920	\$270	\$14,041	\$34,388	\$744	\$29,708	\$830		\$1,248	108
38,427,382	63,810,018	122,755,403	6,350,320	80,923,682	46,020,148	62,717,710	105,126,266	487,620,273	1,000,000	3,957,800	109
\$286,438	\$070,234	\$1,371,374	\$75,330	\$1,032,712	\$500,954	\$1,080,480	\$1,281,168	\$4,916,055	\$13,044	\$49,904	110
111,600,300	273,750,114	278,063,077	44,033,448	336,000	100,028,921	218,724,431	58,110,482	370,084,210	4,601,700	7,578,000	111
\$786,371	\$2,442,000	\$2,705,334	\$303,171	\$3,380	\$1,540,814	\$1,033,074	\$588,082	\$3,033,508	\$43,051	\$77,280	112
\$400	\$0,512	\$33,014	\$15,850	\$0,005	\$14,057	\$380,585	\$7,078	\$00,170			113
951	3,203	1,822	535	81	2,155	875	1,161	4,072	86	120	114
21	387	64	20	190	673	31	227	301	3	20	115
											116
00	387	154	63	109	365	70	104	380	11	10	117
0,785	23,501	10,310	3,047	7,178	10,104	8,653	8,330	42,714	501	887	118
66	273	162	11	16	117	38	148	201	3	11	119
5,063	15,442	13,950	570	535	5,089	3,773	6,535	21,418	269	454	120
17	0	10		10	10	3	4	43			121
624	120	287		288	390	28	105	1,053			122
31	230	23	63	108	384	45	87	506	0	4	123
1,000	7,842	1,746	2,200	5,043	10,006	2,419	1,000	18,554	332	380	124
	1		1		1						125
	14		30		10						126
2	6	12		2	3	7		13		1	127
8	60	70		135	112	37		503		3	128
											129
											130
	2	11	7	7	10	20		9		2	131
	14	260	288	197	488	2,256		230		50	132
				80		40		60			133
				10			20	605			134

STARCH

STARCH.

By ROBERT H. MERRIAM.

This article contains a statistical discussion of the starch industry in the United States in 1905, with comparative data for earlier censuses. A discussion of the method of making starch will be found in Part III of the Report on Manufactures of the census of 1900. The term "cornstarch" as used herein refers to the starch made from Indian corn or maize for laundry, edible, or other purposes.

The statistics for the 131 establishments which made a specialty of manufacturing one or more kinds of starch at the census of 1905, and those for similar establishments at the censuses of 1850 to 1900, inclusive, are summarized in Table 1.

Although there was a steady growth in the industry from 1850 to 1900, using the value of products as a basis of comparison, a decrease is shown for 1905. This decline in the industry since 1900 is also indicated by the decreases in capital invested, number of wage-earners, and the wages paid. This general decline is due largely to a falling off in the export trade in American starch, as shown by Table 7. In the number of establishments there was a slight

increase at the census of 1905 over 1900, although at the censuses of 1850 to 1880 there was a larger number of establishments than at 1890, 1900, and 1905.

Of the three states, Indiana, New York, and Ohio, which were the leaders in this industry in 1900, Indiana is the only one which shows an increase in value of products in 1905, the output having more than doubled between the two censuses. In New York the decrease in value of products amounted to 39.7 per cent, and in Ohio it was more than 75 per cent. Michigan shows a large increase in value of products, while there were decreases shown for Maine, Connecticut, Massachusetts, Minnesota, Nebraska, and North Dakota. Although Illinois, Maryland, and New Hampshire had starch factories in 1900 none were reported in 1905, and Texas, which had no starch factories in 1900, reported 1 in 1905.

In 1900 New York was the leading state in this industry, Indiana being second and Ohio third; but at the present census Indiana leads, with New York second and Iowa third.

TABLE 1.—COMPARATIVE SUMMARY, WITH PER CENT OF INCREASE: 1850 TO 1905.

	CENSUS.							PER CENT OF INCREASE.					
	1905 ¹	1900	1890	1880	1870	1860	1850	1900 to 1905	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments...	131	124	80	130	195	107	140	5.6	55.0	*42.4	*28.7	10.8	14.4
Capital.....	\$7,007,005	\$11,071,507	\$4,920,155	\$5,328,250	\$2,741,075	\$2,051,710	\$902,075	*40.0	130.8	*7.5	94.3	33.0	100.2
Salaried officials, clerks, etc., number.....	248	406	*218	(*)	(*)	(*)	(*)	*38.0	80.2	.....	.....	.....	.....
Salaries.....	\$206,305	\$461,334	*220,000	(*)	(*)	(*)	(*)	*41.0	96.3	.....	.....	.....	.....
Wage-earners, average number.....	1,803	2,055	2,003	3,119	2,072	1,073	694	*32.1	*8.5	*0.9	50.5	63.1	54.0
Total wages.....	\$866,479	\$1,069,600	\$950,108	\$910,107	\$900,710	\$298,526	\$103,224	*21.2	14.7	4.3	2.1	201.7	54.5
Men 16 years and over.....	1,535	2,088	2,307	2,710	1,712	1,003	680	*20.5	*0.5	*14.0	58.3	61.1	55.0
Wages.....	\$799,913	\$986,852	\$840,780	(*)	(*)	(*)	(*)	*18.0	17.4	.....	.....	.....	.....
Women 16 years and over.....	236	535	484	301	317	10	8	*55.0	10.5	60.8	*5.0	3,070.0	25.0
Wages.....	\$58,534	\$107,720	\$105,302	(*)	(*)	(*)	(*)	*45.7	2.2	.....	.....	.....	.....
Children under 16 years.....	32	32	112	108	43	.....	.....	*71.4	3.7	151.2	.....	.....	.....
Wages.....	\$8,032	\$5,124	\$12,000	(*)	(*)	.....	.....	*56.8	*00.5	.....	.....	.....	.....
Miscellaneous expenses.....	\$572,313	\$700,277	\$1,108,135	(*)	(*)	(*)	(*)	*18.3	*30.8	.....	.....	.....	.....
Cost of materials used.....	\$5,200,854	\$6,806,422	\$5,153,677	\$4,911,060	\$3,884,000	\$1,380,000	\$700,450	*0.4	12.7	4.0	20.4	181.5	72.6
Value of products.....	\$8,082,004	\$0,232,084	\$8,034,617	\$7,477,742	\$5,904,422	\$2,823,258	\$1,261,408	*12.5	3.3	10.5	24.7	112.3	123.8

¹ Exclusive of the statistics of 10 establishments, engaged primarily in the manufacture of other products. These establishments manufactured starch to the value of \$4,224,200.

* Decrease.

* Includes proprietors and firm members with their salaries; number only reported in 1900 and 1905, but not included in this table.

* Not reported separately.

* Not reported.

Table 2 presents a comparative summary, by states, of the statistics returned for this industry at the censuses of 1900 and 1905.

TABLE 2.—COMPARATIVE SUMMARY, BY STATES: 1905 AND 1900.

STATE.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS AND WAGES.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Wages.			
United States.....	1905 1900	131 124	\$7,007,095 11,671,567	248 406	\$266,395 451,334	1,803 2,655	\$566,479 1,099,696	\$572,313 700,277	\$5,260,854 5,806,422	\$8,082,904 9,232,984
Connecticut ¹	1900	8	377,400	92	57,180	113	40,128	57,366	285,830	591,000
Illinois ²	1900	3	169,210	6	7,400	86	52,600	22,528	345,324	542,190
Indiana.....	1905 1900	4 4	1,186,868 2,872,833	42 7	60,318 7,871	462 210	248,848 89,200	114,607 22,676	1,498,746 549,830	2,048,072 989,639
Iowa.....	1905 1900	3 4	863,992 700,064	30 35	38,220 37,842	316 327	160,284 114,881	46,209 59,192	658,896 623,814	1,063,055 896,831
Maine.....	1905 1900	65 45	630,157 344,349	21 17	7,626 3,475	107 111	47,442 34,824	31,059 9,176	364,443 358,716	523,994 555,576
Massachusetts ¹	1900	5	344,999	21	23,788	65	34,736	28,708	259,652	390,161
Michigan.....	1905 1900	4 4	1,282,126 408,921	29 35	37,684 35,730	125 83	54,702 30,166	15,600 54,056	510,602 161,089	935,508 330,183
Minnesota.....	1905 1900	12 8	246,523 209,274	10 5	1,915 2,780	27 57	17,975 23,287	16,226 10,570	141,486 250,594	221,355 329,566
Missouri ¹	1900	3	24,700	25	33,600	70	19,475	12,020	126,610	230,000
New Hampshire ²	1900	4	8,100	.....	.....	4	1,465	425	14,887	18,500
New York.....	1905 1900	15 15	1,122,315 3,547,305	41 79	41,849 149,109	389 996	168,312 471,662	113,862 303,643	1,063,494 1,704,054	1,561,913 2,589,903
Ohio ¹	1900	5	2,073,209	31	39,815	199	78,159	84,396	572,168	940,511
Wisconsin.....	1905 1900	12 6	155,972 93,250	4 7	1,772 4,020	28 34	15,136 15,267	5,980 9,999	97,401 100,719	154,797 154,030
All other states.....	¹ 1905 ² 1900	16 10	1,519,742 497,953	71 40	77,011 48,664	349 300	153,780 93,846	228,770 25,522	925,786 453,635	1,574,210 674,894

¹ Included in "all other states" in 1905.

² None reported in 1905.

³ Includes establishments distributed as follows: California, 2; Connecticut, 3; Florida, 2; Massachusetts, 1; Missouri, 1; Nebraska, 1; New Jersey, 1; Ohio, 2; Pennsylvania, 2; Texas, 1.

⁴ Includes establishments distributed as follows: California, 2; Florida, 2; Maryland, 1; Nebraska, 2; New Jersey, 1; North Dakota, 1; Pennsylvania, 1.

Table 3 shows, by states, the distribution of the starch factories as reported at the censuses of 1850 to 1905, inclusive.

TABLE 3.—Number of establishments: 1850 to 1905.

STATE.	1905	1900	1890	1880	1870	1860	1850
United States.....	131	124	80	139	195	167	146
California.....	2	2	.....	.....	.....	.....	.....
Connecticut.....	3	8	7	1	.....	.....	.....
Florida.....	2	2	3	1	.....	.....	.....
Illinois.....	3	3	1	2	1	2	.....
Indiana.....	4	4	8	6	3	3	.....
Iowa.....	3	4	4	2	.....	.....	.....
Kansas.....	.....	.....	1	.....	.....	.....	.....
Kentucky.....	.....	.....	.....	.....	.....	1	1
Maine.....	65	45	18	23	10	8	10
Maryland.....	.....	1	.....	.....	.....	.....	.....
Massachusetts.....	1	5	5	2	3	3	7
Michigan.....	4	4	.....	.....	.....	.....	1
Minnesota.....	12	8	6	.....	.....	.....	.....
Missouri.....	1	3	.....	.....	.....	.....	3
Nebraska.....	1	2	1	.....	.....	.....	.....
New Hampshire.....	.....	4	1	20	66	32	26
New Jersey.....	1	1	.....	.....	.....	1	1
New York.....	15	15	16	60	72	61	22
North Dakota.....	.....	1	.....	.....	.....	.....	.....
Ohio.....	2	5	3	5	.....	4	4
Pennsylvania.....	2	1	1	1	2	4	8
Rhode Island.....	.....	.....	1	1	.....	.....	1
Texas.....	1	.....	.....	.....	.....	.....	.....
Vermont.....	.....	.....	2	13	37	48	62
Wisconsin.....	12	6	2	2	1	.....	.....

In 1850 there were 146 starch factories distributed among 12 states. Of these states, Kentucky, New Hampshire, Rhode Island, and Vermont reported

no factories in 1905; Massachusetts, Missouri, New York, Ohio, and Pennsylvania had fewer in 1905 than in 1850; while Maine and Michigan reported more. In 1905 there were 17 states in which 131 starch factories were operated.

Table 4 shows in detail the quantity and value of starch products reported at the censuses of 1900 and 1905.

TABLE 4.—Quantity and value of products: 1905 and 1900.

PRODUCT.	1905	1900
Aggregate value.....	¹ \$8,082,904	² \$9,232,984
Starch:		
Total number of pounds.....	196,074,530	297,803,189
Total value.....	\$6,751,397	\$8,037,905
Cornstarch—		
Pounds.....	150,520,009	247,051,744
Value.....	\$4,702,309	\$6,133,001
Potato starch—		
Pounds.....	27,709,400	33,941,826
Value.....	\$924,476	\$1,129,129
Cassava and wheat starch—		
Pounds.....	17,845,121	16,809,569
Value.....	\$1,124,612	\$775,835
Cattle food:		
Pounds.....	58,626,677	68,745,819
Value.....	\$508,723	\$258,023
All other products.....	\$822,784	\$936,996

¹ Exclusive of 161,930,496 pounds, valued at \$4,224,200, made in establishments manufacturing starch as a minor product.

² Exclusive of 245,237,000 pounds, valued at \$2,850,888, made in establishments manufacturing starch as a minor product.

The aggregate value of starch manufactured in establishments making it as a principal product in 1905 was \$8,082,904, or 12.5 per cent less than in 1900. The quantity of starch produced in 1905 was 196,074,530 pounds, or 34.2 per cent less than in these establishments in 1900. In 1905, in addition to the 131 factories shown in Table 1, there were, 7 establishments making glucose; 1, soap; 1, flavoring extracts; and 1, washing soda; in all of which starch was manufactured as a minor product. Six of these 10 establishments were located in Illinois, and 1 each in Connecticut, Michigan, Missouri, and New Jersey. Their aggregate production was 161,930,496 pounds of starch, valued at \$4,224,200. Including this output the total production of starch in the United States in 1905 was 358,005,026 pounds, valued at \$10,975,597. In 1900 the output of starch by factories in which the manufacture was secondary amounted to 245,237,000 pounds, valued at \$2,850,888. The total quantity of starch made in the United States in 1900 was, therefore, 543,040,139 pounds, valued at \$10,888,853. The decrease in the total quantity of starch reported at the present census as compared with 1900 amounted to 185,035,113 pounds, or 34.1 per cent, while the value shows an increase of \$86,744, or less than 1 per cent. The decrease in the output is, as heretofore stated, due in a large measure to the decrease in the foreign demand for starch.

The value of the cornstarch made by the 131 factories engaged primarily in the manufacture of starch in 1905 was \$4,702,309, or 58.2 per cent of the value of all products of these establishments; the value of the potato starch was \$924,476, or 12.9 per cent; of cassava and wheat starch, \$1,124,612, or 12.4 per cent; and of cattle food, 508,723, or 6.3 per cent. The value of all other products, which includes gluten feeds, corn oil, soap, etc., was \$822,784, or 10.2 per cent of the total.

The total quantity of starch made from cassava and wheat was only 17,845,121 pounds, or but 8.1 per cent of all starch made by starch factories. Wheat starch was made in California, Connecticut, Massachusetts, Michigan, New York, and Pennsylvania, while cassava or root starch was made only in Florida.

Although there was a decrease of 10,119,142 pounds, or 14.9 per cent, in the quantity of cattle food produced in starch factories, the value increased \$250,700, or 97.2 per cent.

In addition to the 150,520,000 pounds of cornstarch shown in Table 5, 161,930,496 pounds were manufactured by 10 establishments making starch as a minor product. The total output of cornstarch in 1905 was, therefore, 312,450,505 pounds. In addition to the 1900 output of cornstarch shown in Table 5, the establishments making starch as a minor product had an estimated production of cornstarch in that year

of 245,237,000 pounds, valued at \$2,850,888. The 1905 production was, therefore, 179,838,239 pounds less than the total output of this variety of starch in 1900. The value of this starch, however, decreased only \$57,380. At the earlier census, according to the reports, cornstarch was worth about 1½ cents per pound, while in 1905 the value was about 2½ cents, or fully 1 cent more per pound.

Table 5 shows, by states, the quantity and value of cornstarch reported at the censuses of 1900 and 1905.

TABLE 5.—Quantity and value of cornstarch, by states: 1905 and 1900.

STATE.	Cen- sus.	Pounds.	Value.
United States.....	1905 1900	150,520,000 247,051,744	\$4,702,309 6,133,001
Connecticut ¹	1900	11,337,308	581,000
Illinois ²	1900	24,470,800	309,390
Indiana.....	1905 1900	68,094,922 43,970,000	1,733,419 802,330
Iowa.....	1905 1900	28,131,080 30,325,047	582,050 818,271
Massachusetts ³	1900	585,000	40,301
Michigan ⁴	1905	3,420,870	68,417
Missouri ¹	1900	6,700,000	230,000
New York.....	1905 1900	31,815,436 66,170,809	1,336,084 1,915,700
Ohio ¹	1900	34,412,450	783,213
All other states.....	¹ 1905 ² 1900	18,457,701 20,070,250	982,330 400,040

¹ Included in "all other states" in 1905.
² None reported in 1905.
³ None reported in 1900.
⁴ Includes establishments distributed as follows: Connecticut, 3; Missouri, 1; Nebraska, 1; New Jersey, 1; Ohio, 2.
⁵ Includes establishments distributed as follows: Maryland, 1; Nebraska, 2; New Jersey, 1.

Of the 35 starch factories which reported cornstarch at the census of 1900, only 13 reported at the census of 1905. Of the remaining 22 establishments some have been destroyed by fire, others were idle in 1905, and still others had dropped the manufacture of starch for some other business. The output of cornstarch from these 22 factories in 1900 was approximately 148,465,000 pounds. In 1905 reports were received from 8 starch factories which were not reported in 1900. The quantity of cornstarch produced by these establishments was 61,910,340 pounds. There was a net decrease, therefore, in 1905 of 14 in the number of cornstarch factories, and a net loss in product on this account of 86,554,660 pounds, or nearly 50 per cent of the decrease in the total output.

Increased production over 1900 was reported in 1905 from Indiana only. In this state the increase amounted to 24,715,922 pounds, the increase in value being \$841,089. Large decreases were reported from Connecticut, Iowa, Missouri, New York, and Ohio. No cornstarch was reported by starch factories in Illinois in 1905, although in 1900 this state was a large producer. However, 6 glucose factories located in that state reported in 1905, as a minor product, 113,770,344

pounds of cornstarch, valued at \$2,958,029. From neither Massachusetts nor Maryland was any cornstarch reported at the present census, although both states reported production in 1900. Michigan is the only state from which no cornstarch was reported in 1900 that reported production in 1905.

Table 6 shows, by states, the quantity and value of potato starch reported at the censuses of 1900 and 1905.

TABLE 6.—Quantity and value of potato starch, by states: 1905 and 1900.

STATE.	Census.	Pounds.	Value.
United States.....	1905 1900	27,709,400 33,941,826	\$924,476 1,129,129
Maine.....	1905 1900	15,454,787 15,273,633	523,200 544,760
Minnesota.....	1905 1900	6,627,638 10,882,333	221,355 329,576
New York.....	1905 1900	659,517 265,000	23,379 8,935
Wisconsin.....	1905 1900	4,925,858 5,043,060	154,797 154,039
All other states.....	1905 1900	50,600 2,477,800	1,745 91,838

¹ Includes establishments distributed as follows: Michigan, 1; New Hampshire, 4; North Dakota, 1.

The starch factories making potato starch produced 27,709,400 pounds in 1905, or 14.1 per cent of the total quantity of all starch produced by the 131 establishments making the manufacture of starch a specialty. This output of potato starch was 6,232,426 pounds, or 18.4 per cent, less than that of 1900. Over one-half of all the potato starch manufactured was made in Maine. Of the states in which this kind of starch was made, Maine, New Jersey, and New York were the only ones in which there were increases in 1905 as compared with 1900. The decrease in Minnesota was large, and in New Hampshire and North Dakota no potato starch was made in 1905,

although it was reported from these states at the census of 1900.

Table 7 shows the quantity and value of starch exported from the United States each year from 1895 to 1905 inclusive.

TABLE 7.—Quantity and value of exports: 1895 to 1905.¹

YEAR.	Pounds.	Value.
1905.....	61,450,444	\$1,430,572
1904.....	57,185,739	1,340,282
1903.....	27,759,599	832,943
1902.....	28,183,967	656,705
1901.....	102,800,225	2,005,865
1900.....	124,935,963	2,604,362
1899.....	110,193,776	2,292,843
1898.....	72,806,313	1,371,549
1897.....	79,088,876	1,665,926
1896.....	31,839,435	885,198
1895.....	11,788,690	306,800

¹ "Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor.

From 1895 to 1900 inclusive the yearly exportation of starch increased except in 1898, when there was a decrease. Since 1900 there has been a decided decrease, the lowest mark being reached in 1903. In 1904 the quantity of starch exported was more than double that for the preceding year; and while the exportations in 1905 were greater than those in 1904, they were 50.8 per cent less than in 1900. This decrease since 1900 in the quantity of starch exported has been occasioned by the large increase in the manufacture of potato starch in Europe, particularly in Germany and Russia, and a consequent decrease in the foreign demand.

The detailed statistics for the starch industry for 1905 in establishments devoted primarily to its manufacture are presented in Table 8, which gives separate totals for each state in which there are three or more establishments, and groups the statistics for other states so as not to disclose the operations of individual establishments. The 10 factories manufacturing starch as a minor product are not presented in this table.

TABLE 8.—STARCH—DETAILED SUMMARY, BY STATES: 1905.

	United States.	Indiana.	Iowa.	Maine.	Michigan.	Minnesota.	New York.	Wisconsin.	All other states. ¹
Number of establishments.....	131	4	3	65	4	12	15	12	16
Capital:									
Total.....	\$7,007,605	\$1,186,808	\$863,092	\$630,157	\$1,282,120	\$246,623	\$1,122,315	\$155,072	\$1,510,742
Land.....	\$577,640	\$75,000	\$34,075	\$27,440	\$138,820	\$8,550	\$151,880	\$16,950	\$124,025
Buildings.....	\$1,400,512	\$131,030	\$221,500	\$245,500	\$230,910	\$62,700	\$200,340	\$47,360	\$351,116
Machinery, tools, and implements.....	\$2,004,124	\$373,300	\$391,817	\$122,550	\$283,210	\$110,406	\$305,307	\$70,602	\$346,713
Cash and sundries.....	\$2,020,410	\$607,538	\$215,700	\$234,407	\$629,171	\$64,777	\$455,728	\$21,010	\$607,888
Proprietors and firm members.....	111	6	—	74	—	3	19	2	7
Salaried officials, clerks, etc.:									
Total number.....	248	42	30	21	20	10	41	4	71
Total salaries.....	\$260,365	\$60,318	\$38,220	\$7,026	\$37,084	\$1,915	\$41,840	\$1,772	\$77,011
Officers of corporations.....									
Number.....	38	3	3	6	5	3	—	1	17
Salaries.....	\$61,077	\$13,758	\$5,500	\$515	\$14,000	\$75	—	\$300	\$26,020
General superintendents, managers, clerks, etc.:									
Total number.....	210	39	27	15	24	7	41	3	54
Total salaries.....	\$205,318	\$46,560	\$32,720	\$7,111	\$23,084	\$1,840	\$41,840	\$1,472	\$50,082
Men.....									
Number.....	173	33	22	14	21	7	30	3	43
Salaries.....	\$186,615	\$42,621	\$30,050	\$6,487	\$22,324	\$1,840	\$30,039	\$1,472	\$45,782
Women.....									
Number.....	37	6	5	1	3	—	11	—	11
Salaries.....	\$18,703	\$3,939	\$2,670	\$624	\$1,360	—	\$5,810	—	\$4,300
Wage-earners, including pieceworkers, and total wages:									
Greatest number employed at any one time during the year.....	3,540	553	340	657	182	147	800	132	532
Least number employed at any one time during the year.....	2,076	403	274	552	105	101	235	96	274
Average number.....	1,803	462	316	107	125	27	380	28	349
Total wages.....	\$860,470	\$248,848	\$100,281	\$47,442	\$64,702	\$17,075	\$108,312	\$15,136	\$163,780
Men 16 years and over—									
Average number.....	1,535	366	280	105	115	27	264	28	311
Wages.....	\$799,913	\$231,216	\$153,240	\$47,070	\$52,302	\$17,075	\$138,012	\$15,136	\$144,053
Women 16 years and over—									
Average number.....	236	62	26	2	10	—	60	—	37
Wages.....	\$58,534	\$17,031	\$6,000	\$363	\$2,400	—	\$22,400	—	\$0,440
Children under 16 years—									
Average number.....	32	4	1	—	—	—	20	—	1
Wages.....	\$8,032	\$601	\$144	—	—	—	\$7,000	—	\$287
Average number of wage-earners, including pieceworkers, employed during each month: ²									
Men 16 years and over—									
January.....	1,216	332	272	4	70	—	247	2	283
February.....	1,341	353	272	4	135	4	205	2	306
March.....	1,280	352	273	4	132	8	153	2	305
April.....	1,406	413	275	8	120	—	193	2	380
May.....	1,445	420	280	4	127	—	212	2	304
June.....	1,444	435	288	4	122	—	236	3	350
July.....	1,392	405	291	4	60	—	302	5	310
August.....	1,414	412	297	4	58	0	344	4	286
September.....	2,121	410	300	554	149	78	326	46	258
October.....	2,350	410	302	590	165	132	353	124	295
November.....	1,061	408	307	67	145	93	260	113	270
December.....	1,338	368	311	4	70	—	277	31	241
Women 16 years and over—									
January.....	172	52	25	—	15	—	63	—	17
February.....	192	60	26	—	15	—	73	—	18
March.....	175	62	25	—	15	—	32	—	41
April.....	253	75	25	—	15	—	83	—	55
May.....	266	75	26	—	15	—	80	—	64
June.....	240	67	28	—	—	—	82	—	63
July.....	250	55	28	—	—	—	114	—	53
August.....	263	52	28	—	—	—	140	—	37
September.....	259	50	26	12	—	—	142	—	20
October.....	203	67	23	12	15	—	149	—	27
November.....	251	64	22	—	15	—	128	—	22
December.....	218	65	30	—	15	—	90	—	18
Miscellaneous expenses:									
Total.....	\$572,313	\$114,007	\$40,200	\$31,050	\$15,000	\$10,226	\$113,862	\$5,080	\$228,770
Rent of works.....	\$1,500	\$300	\$180	\$100	—	—	\$120	—	\$800
Taxes, not including internal revenue.....	\$34,451	\$4,476	\$2,600	\$3,524	\$3,370	\$1,355	\$10,650	\$1,543	\$6,027
Rent of offices, interest, insurance, and all other sundry expenses not hitherto included.....	\$536,272	\$109,831	\$43,420	\$27,135	\$12,230	\$14,871	\$103,086	\$4,437	\$221,253
Materials used:									
Total cost.....	\$5,208,854	\$1,408,746	\$658,806	\$304,443	\$510,602	\$141,480	\$1,003,404	\$97,401	\$925,780
Principal materials—									
Total cost.....	\$2,700,640	\$1,110,833	\$410,355	\$331,250	\$50,558	\$130,583	\$340,873	\$88,080	\$222,217
Corn—									
Pounds.....	245,712,085	127,641,070	51,430,000	—	6,539,624	—	35,584,040	—	24,512,740
Cost.....	\$2,142,908	\$1,110,833	\$410,355	—	\$68,306	—	\$335,228	—	\$222,217
Potatoes—									
Pounds.....	209,372,540	—	—	105,604,521	400,080	60,167,770	5,272,200	37,747,078	—
Cost.....	\$568,651	—	—	\$331,250	\$1,103	\$130,583	\$11,045	\$48,080	—
Fuel.....	\$250,105	\$83,061	\$30,000	\$16,455	\$20,821	\$0,340	\$43,157	\$5,593	\$38,205
Rent of power and heat.....	\$4,018	\$3,080	\$500	\$275	\$58	—	\$7,774	\$341	\$105
Mill supplies.....	\$35,880	\$14,250	\$3,100	\$1,103	\$1,230	\$613	\$6,075	\$613	\$0,081
All other materials.....	\$2,220,081	\$271,684	\$208,145	\$16,300	\$408,681	\$900	\$905,075	\$900	\$668,624
Freight.....	\$30,201	\$5,270	\$4,393	—	\$13,345	\$51	\$15	\$1,624	\$2,054
Products:									
Total value.....	\$8,082,904	\$2,048,072	\$1,063,055	\$523,004	\$935,508	\$221,355	\$1,561,013	\$154,707	\$1,574,210
Starch—									
Total number of pounds.....	106,074,530	68,004,022	28,131,080	15,454,787	9,102,054	6,627,638	33,180,913	4,025,858	20,801,278
Total value.....	\$6,751,307	\$1,733,410	\$582,050	\$523,200	\$623,200	\$221,355	\$1,395,511	\$154,707	\$1,510,200
Cornstarch—									
Pounds.....	150,520,000	68,004,022	28,131,080	—	3,420,870	—	31,815,430	—	18,487,701
Value.....	\$4,702,309	\$1,733,410	\$582,050	—	\$68,417	—	\$1,330,084	—	\$682,330
Potato starch—									
Pounds.....	27,700,400	—	—	15,454,787	50,000	6,627,638	650,517	4,025,858	—
Value.....	\$624,478	—	—	\$523,200	\$1,745	\$221,355	\$23,370	\$154,707	—
Cassava and wheat starch—									
Pounds.....	17,845,121	—	—	—	5,690,584	—	720,060	—	11,433,577
Value.....	\$1,124,612	—	—	—	\$50,703	—	\$30,048	—	\$527,801

¹ Includes establishments distributed as follows: California, 2; Connecticut, 3; Florida, 2; Massachusetts, 1; Missouri, 1; Nebraska, 1; New Jersey, 1; Ohio, 2; Pennsylvania, 2; Texas, 1.

² The average number of children under 16 years employed during each month is not included in the table, because of the small number reported.

MANUFACTURES.

TABLE 8.—STARCH—DETAILED SUMMARY, BY STATES: 1905—Continued.

[illegible]

CANNING AND PRESERVING

CANNING AND PRESERVING, FRUITS AND VEGETABLES, FISH, AND OYSTERS.

By EMMONS K. ELLSWORTH.

In theory, any process applied to raw or prepared materials that gives them new forms, qualities, or properties is considered manufacturing; but the canning and preserving of fruits and vegetables is an industry so closely allied to agriculture, and that of fish and of oysters to fishing, that neither has been classified as manufacturing except in the more recent Census reports. Consequently, although the canning of fruits and vegetables was carried on previous to 1870 and that of fish and oysters previous to 1890, no reliable statistics are available for the former earlier than the census of 1870 or for the latter earlier than the census of 1890.

These industries are so closely related that, during the earlier periods, the canning and preserving of fruits and vegetables, fish, and oysters were often carried on at the same establishment. This is true to some extent even at the present time. For instance, in Baltimore, Md., there are several establishments at which fruits and vegetables are canned during the summer and oysters during the winter. The two branches of the industry are carried on in the same building with the use of the same machinery; hence it is impossible to ascertain the amount of capital invested in each branch or to segregate the labor employed and cost of materials used.

In the preparation of the Census reports, establishments at which the manufacture of two or more products is carried on are given the classification of the product of greatest value. Thus many establishments which can considerable quantities of fruits and vegetables, fish, and oysters are not included in the figures herein presented, their predominating product being such that they are classified under the head of "food preparations," "pickles, preserves, and sauces," or otherwise. Furthermore, a considerable quantity of oysters is shown as a minor product of establishments classified as canning and preserving, fruits and vegetables. For this reason some of the tables which have been prepared for this report show the entire production of canned fruits and vegetables, fish, and oysters without regard to the classification under which they were returned.

In the census returns for 1900, the value of oysters shucked and sold in bulk was included in the value of oysters reported, while at the present census this item was eliminated, and the value of products limited to that of oysters preserved and hermetically sealed in cans. This change has necessitated some readjustment of the statistics returned at the census of 1900 to make them comparable with those for 1905. Eleven establishments at which the entire product was shucked oysters have been omitted, as have also two establishments engaged in packing fish. Eleven establishments variously classified in 1900 have been changed to correspond with their principal product. Five of these have been transferred from the classification "canning and preserving, oysters" and three from "food preparations" to that of "canning and preserving, fruits and vegetables;" and three from "canning and preserving, fruits and vegetables" to "pickles, preserves, and sauces."

Table 1 presents a comparative summary of the combined statistics for the three canning and preserving industries as returned at the censuses of 1890, 1900, and 1905, with the percentages of increase.

TABLE 1.—Canning and preserving, fruits and vegetables, fish, and oysters—comparative summary, with per cent of increase: 1890 to 1905.

	CENSUS.			PER CENT OF INCREASE.	
	1905	1900	1890	1900 to 1905	1890 to 1900
Number of establishments	2,703	2,182	1,012	23.0	115.0
Capital	\$70,082,076	\$47,001,534	\$19,000,122	40.0	143.2
Salaried officials, clerks, etc., number	3,024	2,308	11,802	51.1	76.1
Salaries	\$3,236,138	\$1,883,550	\$782,534	71.8	140.7
Wage-earners, average number	50,238	51,870	58,235	+3.2	+10.9
Total wages	\$14,218,170	\$12,700,310	\$9,422,070	11.0	97.0
Men 16 years and over	22,028	24,233	23,738	+5.4	2.1
Wages	\$8,023,703	\$8,128,305	\$3,778,705	0.8	115.1
Women 16 years and over	23,437	23,207	28,257	1.0	+17.0
Wages	\$4,817,522	\$4,108,800	\$2,437,087	17.2	68.5
Children under 16 years	3,873	4,430	0,240	+12.8	+28.0
Wages	\$470,855	\$472,040	\$205,288	1.0	120.0
Miscellaneous expenses	\$8,500,084	\$3,120,780	\$1,650,540	175.3	80.1
Cost of materials used	\$70,058,080	\$51,880,372	\$25,404,730	38.3	101.8
Value of products	\$108,505,471	\$70,070,404	\$40,005,450	30.2	68.7

¹ Includes proprietors and firm members, with their salaries; number only reported in 1900 and 1905, but not included in this table.
² Decrease.

For the industry as a whole there was a great increase at each census as compared with the previous one. The only items which show decreases are the ones relating to the average number of wage-earners. The decrease in the average number of wage-earners is apparent rather than real, and is due to the difference in methods of computation employed at the different censuses. In 1890 the average number was computed only for the actual time the establishment was reported in operation, while in 1900 and 1905 the average number for the entire year was found, thus materially decreasing the average in the case of establishments which were idle for a portion of the year. The decrease in 1905 as compared with 1900 is due to the fact that many of the persons who were employed at fish canning establishments worked under the con-

tract system, being paid by the quantity of fish put up, and therefore were not reported as wage-earners. The wages of such persons were included under miscellaneous expenses, which item shows an increase of 175.3 per cent, by far the largest percentage of increase shown.

The percentage of increase for capital was greater during both periods than for either the number of establishments or the value of products, a fact which indicates a considerable increase in the average capital per establishment, and also in the amount employed to produce a given product.

Table 2 is a summary of the statistics for each of the three branches of the canning and preserving industry for 1905, with the percentages which each formed of the total.

TABLE 2.—CANNING AND PRESERVING, FRUITS AND VEGETABLES, FISH, AND OYSTERS—SUMMARY FOR THE UNITED STATES: 1905.

	Total.	Fruits and vegetables.	Per cent of total.	Fish.	Per cent of total.	Oysters.	Per cent of total.
Number of establishments.....	2,703	2,261	83.6	373	13.8	69	2.6
Capital.....	\$70,082,076	\$47,629,497	68.0	\$19,853,016	28.3	\$2,599,563	3.7
Salaried officials, clerks, etc., number.....	3,324	2,653	73.2	785	21.7	186	5.1
Salaries.....	\$3,236,138	\$2,241,788	69.3	\$873,483	27.0	\$120,867	3.7
Wage-earners, average number.....	50,238	39,988	79.6	6,059	13.9	3,291	6.5
Total wages.....	\$14,218,170	\$10,428,521	73.3	\$3,241,740	22.8	\$547,909	3.9
Men 16 years and over.....	22,928	16,760	73.1	5,262	22.9	906	4.0
Wages.....	\$8,923,793	\$5,902,779	66.1	\$2,738,157	30.7	\$282,857	3.2
Women 16 years and over.....	23,437	20,438	87.2	1,367	5.8	1,632	7.0
Wages.....	\$4,817,622	\$4,176,780	86.7	\$445,228	9.2	\$195,514	4.1
Children under 16 years.....	3,873	2,790	72.0	330	8.5	753	19.5
Wages.....	\$476,855	\$348,962	73.2	\$58,355	12.2	\$69,538	14.6
Miscellaneous expenses.....	\$8,590,984	\$5,275,619	61.4	\$3,082,771	35.9	\$232,594	2.7
Cost of materials used.....	\$70,058,086	\$51,582,460	73.6	\$15,885,354	22.7	\$2,590,272	3.7
Value of products.....	\$108,505,471	\$78,142,022	72.0	\$26,377,210	24.3	\$3,986,239	3.7

The table shows that the canning of fruits and vegetables is far more important in every particular than that of either fish or oysters. The item of the canning and preserving industry of which fruits and vegetables formed the smallest proportion was miscellaneous expenses, and even of that item the per cent was 61.4. The largest proportion which any item for fruits and vegetables formed of the corresponding total for canning and preserving was 87.2 per cent in the case of women wage-earners 16 years of age and over. It also formed 83.6 per cent of the total number of establishments, 68 per cent of the total capital, and 72 per cent of the total value of products.

The canning of fish was next in importance to that of fruits and vegetables in all items, except the number of women and of children wage-earners, and the amount of children's wages. The proportion of the various totals for the three branches of the canning industry treated, which are formed by the corresponding totals for fish, varies from 5.8 per cent, shown in the case of the number of women wage-earners, to 35.9 per cent in the case of miscellaneous expenses. This comparatively large proportion of the total amount of miscellaneous expenses may be attributed to the large amount of contract work employed at fish canning

establishments, which is included under miscellaneous expenses. This branch of the industry formed 13.8 per cent of the number of establishments, 28.3 per cent of the capital invested, and 24.3 per cent of the value of products.

Oyster canning and preserving is the least important of the three branches of the industry, forming but 2.6 per cent of the total number of establishments and 3.7 per cent of the capital and value of products. The largest proportion which any of its totals form of the corresponding totals for the industry as a whole is 19.5 per cent for the number of children under 16 years.

Table 3 shows the imports of canned and preserved fish, fruits, and vegetables for each year from 1901 to 1905, inclusive, and Table 4 shows the exports of these commodities and of oysters for the same period, as presented in the annual reports of the Bureau of Statistics of the Department of Commerce and Labor. Owing to the differences between the classifications used by the Bureau of Statistics and those adopted by the Bureau of the Census, the two tables are not strictly comparable with the others used, but in a general way they present the relation of this industry to our foreign trade in these products.

TABLE 3.—IMPORTS OF FISH, FRUITS, AND VEGETABLES, CANNED OR PRESERVED: 1901 TO 1905.¹

ARTICLE.	1905	1904	1903	1902	1901
Aggregate value.....	\$10,558,850	\$10,093,484	\$9,352,088	\$8,927,047	\$7,503,515
Fish, total value.....	7,304,752	6,921,500	6,103,580	5,927,848	4,852,097
Anchovies and sardines packed in oil or otherwise.....	2,283,358	1,661,540	1,438,506	1,710,774	1,322,252
Cod, haddock, hake, and pollock, dried, smoked, pickled, or salted.....	1,041,938	1,104,098	1,021,212	1,095,330	667,007
Herring:					
Dried or smoked.....	60,301	67,520	68,000	130,041	88,274
Pickled or salted.....	1,555,000	1,575,241	1,734,487	1,313,597	1,163,011
Mackerel, pickled or salted.....	1,425,873	1,672,812	1,118,408	1,003,854	837,790
Salmon, pickled or salted.....	33,005	33,500	30,310	41,822	43,930
All other varieties, cured or preserved.....	604,608	776,609	601,001	631,524	729,173
Fruits, total value.....	1,036,136	2,198,727	2,061,505	1,808,838	1,727,312
Plums and prunes.....	63,617	46,076	63,218	44,077	62,880
Raisins.....	273,031	355,542	470,844	390,973	297,631
Prepared or preserved fruits.....	1,500,488	1,796,209	1,521,443	1,454,788	1,366,801
Vegetables prepared or preserved, total value.....	1,317,071	1,573,257	1,187,897	1,101,261	923,506

¹ "Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor, 1905.TABLE 4.—EXPORTS OF FISH, OYSTERS, FRUITS, AND VEGETABLES, CANNED OR PRESERVED: 1901 TO 1905.¹

ARTICLE.	1905	1904	1903	1902	1901
Aggregate value.....	\$15,173,733	\$18,260,716	\$15,833,174	\$11,121,134	\$12,500,034
Fish, total value.....	6,338,468	7,606,813	6,530,528	6,348,190	6,584,005
Dried, smoked, or cured:					
Cod, haddock, hake, and pollock.....	214,056	167,103	148,557	270,440	345,597
Herring.....	53,080	44,336	33,632	57,287	84,239
All other.....	11,688	10,295	23,020	15,707	24,422
Pickled:					
Mackerel.....	17,014	7,848	7,360	15,034	16,858
All other.....	77,361	41,784	74,346	83,602	99,766
Salmon:					
Canned.....	3,035,460	5,224,598	4,350,791	3,991,402	4,230,271
All other, fresh or cured.....	1,832,655	1,163,480	809,352	694,435	426,738
Canned fish other than salmon or shellfish.....	112,510	115,283	105,228	166,053	200,626
Shellfish:					
Oysters.....	633,430	610,762	630,035	743,521	831,152
All other.....	360,280	311,315	296,307	310,100	324,336
Fruits, total value.....	8,255,227	9,844,323	8,695,887	4,212,332	5,396,115
Apples, dried.....	2,208,414	2,791,421	2,378,635	1,190,593	1,510,581
Apricots, dried.....	606,777	608,511	713,887	178,143	(*)
Prunes.....	2,455,050	3,410,407	3,512,507	1,404,422	580,113
Raisins.....	372,087	281,402	284,630	140,216	218,715
Preserved fruits:					
Canned.....	2,541,025	2,637,002	1,730,571	1,195,635	3,006,100
All other.....	71,808	115,400	66,767	94,323	71,597
Vegetables, canned, total value.....	550,048	710,580	507,750	500,612	528,914

¹ "Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor, 1905.

* Includes small amounts of fresh fish.

* Included in "all other fruits" prior to 1902.

Table 3 shows that there was an increase of \$3,055,344, or 40.7 per cent, in imports of canned or preserved fish, fruits, and vegetables during the five years. From 1901 to 1904 there was a steady increase in the total. In 1905 there was a slight decrease, though the figures are greater than those for 1901, 1902, or 1903. For both fruits and vegetables similar conditions prevailed, each increasing from 1901 to

1904, and showing a small decrease in 1905, but for fish the increase continued throughout the period. According to the statistics there were no imports of oysters.

Table 4 shows a decrease for 1902 as compared with 1901 in the total value of the products of the canning industry exported. After 1902, however, the increase was continuous until 1905. The figures for

the year 1905 show a decrease from those for 1904, in which year the annual exports reached a maximum for the five-year period. In 1904 the value of the canned and preserved fruits exported was \$9,844,323; the value of fish, \$7,696,813; and of vegetables, \$719,580.

A comparison of the two tables shows that in the year 1905 the United States imported canned and preserved fruits to the value of \$1,936,136, while it exported like products to the value of \$8,255,227, or more than four times the amount of imports; and in 1904 the difference was even greater. In 1905 the imports of fish and of vegetables exceeded the exports by \$966,294 and \$737,923, respectively. Therefore the increase of exports over imports for all classes of products was \$4,614,874, or 43.7 per cent.

Table 5 shows the value of fruits and vegetables, and of fish and oysters canned and preserved in the United States in 1905, the imports and exports for the same year, and the percentage that the imports and exports constituted of the value of the corresponding domestic product.

TABLE 5.—*Canning and preserving, fruits and vegetables, fish, and oysters—value of products, imports, and exports, and per cent of imports and exports to products: 1905.*

Fruits and vegetables:	
Value of products.....	\$78,142,022
Value of imports.....	\$3,254,107
Per cent of imports to products.....	4.2
Value of exports.....	\$8,835,275
Per cent of exports to products.....	11.3
Fish and oysters:	
Value of products.....	\$30,363,449
Value of imports.....	\$7,304,752
Per cent of imports to products.....	24.1
Value of exports.....	\$6,338,458
Per cent of exports to products.....	20.9

In 1905 the value of imported canned and preserved fruits and vegetables was equal to but 4.2 per cent of the value of the corresponding domestic product, while the value of the products exported formed 11.3 per cent. The imports of canned and preserved fish and oysters were equal to 24.1 per cent and the exports were 20.9 per cent of the value of those produced in this country. As these figures indicate, a comparatively small part of these varieties of canned goods are exported, the greater portion of them being used for home consumption.

Table 6 presents a comparative summary of the statistics of the canning and preserving industry, by states and territories, for 1900 and 1905, together with a classification of the value of products. In this table the total value of each product is shown without regard to the classification under which it was reported. As an example, for the state of Maryland, oysters to the value of \$384,226 were reported on the schedules for canning and preserving fruits and vegetables, and are shown in the report for fruits and vegetables as "all other products." In this table they are not included in the value of "all other products" but are included in the value of oysters. The table, however, does not include canned and preserved fruits and vegetables valued at \$715,920, fish at \$274,403, and oysters at \$12,900 put up by establishments classified under the heads of "pickles, preserves, and sauces," "food preparations," etc., which must be taken into consideration to determine the total amount of these goods canned and preserved during the year.

TABLE 6.—CANNING AND PRESERVING, FRUITS AND VEGETABLES, FISH, AND OYSTERS—

1	2	STATE OR TERRITORY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS AND WAGES.							
						Number.	Salaries.	Total.		Men 16 years and over.		Women 16 years and over.		Children under 16 years.	
								Average number.	Wages.	Average number.	Wages.	Average number.	Wages.	Average number.	Wages.
		United States.....	1905 1900	2,703 2,182	\$70,082,076 47,091,534	3,624 2,308	\$3,236,138 1,883,559	50,238 51,879	\$14,218,170 12,709,310	22,928 24,233	\$8,923,793 8,128,365	23,437 23,207	\$4,817,522 4,108,899	3,873 4,439	\$476,855 472,046
3	4	Alaska.....	1905 1900	63 30	10,275,736 3,203,228	175 64	291,951 106,430	1,805 2,092	950,081 1,242,042	1,766 2,091	942,312 1,242,237	27 1	6,548 405	12	1,221
5	6	Arkansas.....	1905 1900	67 34	124,106 33,038	8 2	1,558 350	194 136	38,497 21,942	68 50	19,148 10,079	109 72	17,408 10,495	17 14	1,941 1,368
7	8	California.....	1905 1900	184 158	10,252,556 5,169,720	530 304	715,804 301,763	7,378 8,017	2,645,229 2,186,407	2,678 2,155	1,325,457 857,660	4,431 5,421	1,272,474 1,274,501	269 441	47,298 54,246
9	10	Colorado.....	1905 1900	7 7	302,650 277,325	14 18	13,480 23,700	212 206	79,252 62,561	120 66	58,561 37,855	76 116	17,862 19,456	16 24	2,829 5,250
11	12	Connecticut.....	1905 1900	5 5	88,600 91,463	5 7	2,800 3,260	71 100	15,219 24,967	28 35	8,354 12,203	42 64	6,765 12,614	1 1	100 150
13	14	Delaware.....	1905 1900	60 55	1,006,628 970,137	37 29	18,037 14,278	1,000 1,472	186,823 234,149	385 545	87,786 118,751	511 767	87,035 103,119	104 160	12,002 12,279
15	16	Florida.....	1905 1900	8 8	88,452 87,450	19 8	7,996 7,001	177 152	24,671 32,797	35 46	10,579 13,257	104 81	11,028 16,375	38 25	3,064 3,165
17	18	Georgia.....	1905 1900	9 9	113,905 53,017	18 7	10,745 5,310	579 323	55,056 28,145	68 168	22,610 18,330	268 100	18,407 7,860	243 55	14,039 1,955
19	20	Illinois.....	1905 1900	66 64	1,707,125 1,254,632	77 74	71,777 53,710	1,145 1,273	386,458 327,483	749 738	301,301 236,923	359 488	77,787 84,732	37 47	7,370 5,828
21	22	Indiana.....	1905 1900	96 60	3,360,030 1,205,494	197 155	129,748 112,174	3,102 2,002	757,187 386,457	1,438 824	473,752 219,239	1,489 1,068	258,733 156,473	175 110	24,702 10,745
23	24	Iowa.....	1905 1900	40 27	1,985,493 1,031,696	82 48	68,585 28,265	1,163 701	292,512 185,490	607 323	204,929 115,410	388 266	74,920 54,575	108 112	12,663 15,505
25	26	Kansas.....	1905 1900	4 5	131,230 30,300	11 11	3,735 3,254	100 116	22,050 17,148	42 51	15,199 10,124	34 51	4,870 5,564	24 14	1,981 1,460
27	28	Kentucky.....	1905 1900	9 8	188,982 95,600	18 12	11,540 5,840	316 231	40,461 36,903	116 89	17,272 19,248	173 105	21,204 14,094	27 37	1,985 3,561
29	30	Louisiana.....	1905 1900	10 9	728,340 250,939	72 17	43,058 16,040	433 333	104,487 78,625	120 126	43,853 54,615	244 108	49,127 22,260	69 39	11,507 1,750
31	32	Maine.....	1905 1900	229 176	3,382,431 9,346,881	331 279	237,219 190,351	3,415 6,471	1,288,806 1,388,359	1,882 3,382	853,873 977,665	1,213 2,062	381,231 294,687	320 1,027	53,702 116,007
33	34	Maryland.....	1905 1900	390 279	6,993,188 5,247,930	400 281	307,252 276,568	9,067 9,149	1,762,657 1,750,079	3,247 3,693	834,487 966,390	4,703 4,470	796,024 685,910	1,117 986	132,146 97,779
35	36	Massachusetts.....	1905 1900	55 70	2,073,971 1,782,602	158 131	135,882 110,731	1,115 1,467	474,279 515,068	859 1,251	410,493 471,441	255 213	63,656 43,102	1 3	130 525
37	38	Michigan.....	1905 1900	118 101	1,326,290 504,612	114 51	70,356 25,491	1,358 816	329,092 178,013	508 302	181,192 99,598	802 463	141,939 72,554	48 51	5,961 5,861
39	40	Minnesota.....	1905 1900	17 4	258,820 43,650	28 2	13,280 1,000	149 45	40,402 8,523	61 17	22,818 6,670	59 26	13,320 1,590	29 2	4,264 263
41	42	Mississippi.....	1905 1900	11 8	980,374 328,129	57 16	30,718 16,900	757 650	171,840 122,982	246 184	86,017 67,607	349 317	63,690 40,225	102 149	22,133 15,150
43	44	Missouri.....	1905 1900	62 45	411,886 323,600	83 72	15,357 19,367	530 638	80,500 115,592	102 108	37,463 51,048	272 308	34,937 54,883	96 102	8,190 9,661
45	46	Nebraska.....	1905 1900	8 5	356,657 123,623	20 9	11,184 6,400	292 161	62,065 21,686	157 81	38,672 13,200	90 50	18,818 6,000	45 30	4,575 2,486
47	48	New Hampshire.....	1905 1900	4 4	25,738 22,302	1 1	600 600	15 19	3,929 5,957	6 11	2,360 4,700	7 8	1,351 1,257	2	218
49	50	New Jersey.....	1905 1900	61 74	1,811,492 1,436,721	48 63	35,478 33,830	1,572 2,000	355,432 425,592	689 826	209,672 235,816	847 1,088	141,410 180,952	36 86	4,350 8,824
51	52	New York.....	1905 1900	565 520	10,410,610 6,749,623	460 208	476,299 207,545	6,788 5,584	2,002,351 1,453,662	3,200 2,331	1,251,833 829,988	3,421 8,034	728,618 625,586	161 219	21,900 28,688
53	54	North Carolina.....	1905 1900	23 21	126,007 48,840	16 2	4,795 300	199 323	29,959 41,581	97 177	19,456 20,651	83 121	8,995 12,505	19 25	1,508 2,425
55	56	Ohio.....	1905 1900	77 72	1,768,001 911,995	117 103	75,327 58,975	1,577 1,608	400,061 305,393	864 581	280,179 158,919	661 841	114,183 123,826	52 180	5,699 22,648
57	58	Oregon.....	1905 1900	47 41	1,875,452 2,679,997	100 67	98,827 66,475	523 765	247,177 237,814	365 652	212,876 226,745	136 71	31,001 7,569	22 42	3,300 3,500
59	60	Pennsylvania.....	1905 1900	53 40	849,664 520,281	47 35	21,182 25,309	498 468	147,399 123,179	203 211	62,522 81,345	228 206	48,289 35,833	67 51	6,588 6,001
61	62	South Carolina.....	1905 1900	14 14	202,319 35,626	20 7	13,540 1,380	1,044 126	111,778 13,134	199 33	39,256 6,054	601 67	50,537 5,080	244 26	21,985 2,000

¹ Value of each product is value of total amount manufactured at the three classes of establishments, without regard to particular class by which reported.

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COMPARATIVE SUMMARY, BY STATES AND TERRITORIES: 1905 AND 1900.

Miscellaneous expenses.	Cost of materials used.	VALUE OF PRODUCTS. ¹									
		Total.	Canned vegetables.	Canned fruits.	Dried fruits.	Canned fish.	Smoked fish.	Salted fish.	Oysters.	All other products.	
\$8,500,084 4,120,789	\$70,058,083 51,583,372	\$108,505,471 79,679,464	\$45,262,148 28,734,528	\$11,644,042 11,311,062	\$15,664,784 4,757,005	\$16,983,779 14,051,559	\$2,362,740 957,741	\$6,200,556 5,193,627	\$3,799,412 2,054,800	\$6,588,010 12,610,072	1 2
1,820,800 150,854	3,546,208 1,587,883	7,735,782 3,821,136	180,203 100,503	36,028 15,003	8,262	120,094 80,861		114,520 212,308		2,674,000 5,939 4,642	3 4 5 6
7,243 952	104,310 50,054	180,203 100,503	36,028 15,003	8,262						5,939 4,642	7 8
1,535,015 440,108	18,005,042 9,810,402	24,826,128 14,250,261	2,306,061 2,274,037	6,978,083 7,360,050	13,800,601 2,911,520	229,163 339,718	71,088 9,000	483,610 455,900	225,017	674,305 960,058	9 10
26,210 14,588	251,000 223,454	474,436 343,364	303,361 247,083	25,875 3,750						55,200 92,501	11 12
1,104 1,085	28,245 81,887	50,457 124,280	51,670 101,088	7,387 22,217						400 1,015	13 14
60,784 20,263	1,035,550 1,109,632	1,463,685 1,614,263	1,406,102 1,414,308	36,731 128,663			7,530 6,833	1,040		13,352 63,389	15 16
5,145 5,900	79,052 51,448	130,002 107,624	2,516	165				2,000	125,000 95,703	8,492 9,150	17 18
8,213 4,364	159,037 107,253	270,377 187,134	915 7,522	12,712 111,875					250,750 66,192	1,545	19 20
190,822 125,080	1,007,710 1,300,080	3,133,026 2,310,580	2,046,788 1,774,913	15,115 23,775	67,443 144,250		22,000 6,000	2,000		82,520 358,712	21 22
505,780 105,755	3,007,161 1,520,088	5,086,800 2,580,008	4,422,058 2,100,003	28,006 21,307	5,080					635,872 303,828	23 24
154,744 63,518	1,504,306 776,751	2,779,804 1,372,058	2,772,340 1,322,622	100 7,060	1,125				13,000	7,304 20,151	25 26
10,582 11,722	50,881 68,405	89,750 113,675	88,075 110,825	225 2,850						550	27 28
0,405 10,100	185,074 75,340	288,510 192,787	234,105 180,187	2,012 7,200	5,400					51,400	29 30
96,553 9,531	521,740 176,788	922,777 309,837	2,508	625		365,708 91,236		16,910	507,373 71,025	60,503 130,000	31 32
431,330 140,078	4,085,076 3,360,738	7,073,422 6,115,404	1,714,414 1,068,936	121,173 30,479		4,300,124 4,101,983	254,155 120,310	304,284 203,577		270,272 440,119	33 34
652,420 437,017	9,071,302 10,424,087	12,708,511 14,241,703	9,550,011 9,200,001	1,705,824 1,422,008		38,000 92,100		18,800	548,646 923,597	770,931 5,542,437	35 36
164,501 125,450	3,558,210 3,855,712	4,704,248 5,160,907	81,575 57,504	45,204 755		76,342 250,578	364,512 328,540	3,088,331 3,807,008		200,284 705,022	37 38
180,070 30,940	1,123,054 587,138	1,842,131 949,374	872,145 108,755	501,078 278,532	170,080 243,285		80,500 64,877			199,708 163,925	39 40
14,055 1,462	100,004 17,920	275,200 49,200	251,085 49,200	900			6,400	14,875		1,010	41 42
95,447 20,515	1,031,817 617,931	1,568,856 906,030	3,347	12		134,515 140,368			1,340,042 630,003	27,040 126,038	43 44
21,844 27,418	353,308 408,006	508,013 744,086	485,375 535,307	5,004 27,827	900 4,800					10,674 170,722	45 46
20,228 10,325	308,066 130,573	550,480 210,688	541,710 193,286	14,779 13,000	100					3,000 3,402	47 48
3,461 370	10,403 21,581	20,047 31,434	16,418 18,003	3,620 0,000	800 3,725			1,470		100 976	49 50
161,222 83,603	1,402,453 1,410,571	2,200,100 2,224,176	1,923,883 1,858,480	104,573 107,013			52,404 17,580	7,420		119,330 233,674	51 52
1,031,725 507,210	7,730,402 5,720,073	12,010,755 9,179,100	6,836,451 4,410,261	1,207,790 1,347,300	1,340,040 1,275,100	37,050	777,850 101,082	80,057 51,285	7,700	2,616,320 1,088,073	53 54
22,007 1,565	153,342 133,120	221,514 108,000	25,168 40,700	18,003 10,881					144,273 108,250	33,080 20,700	55 56
103,735 73,701	1,725,473 1,107,075	2,840,350 1,042,438	2,718,031 1,700,432	40,004 74,263	13,215			500 540		71,164 84,498	57 58
200,700 152,401	1,021,070 1,201,508	2,032,800 1,930,307	30,045 14,300	214,303 100,650	31,000 19,461	1,004,762 1,055,320	8,100 10,000	980,384 30,000	10,000 21,735	240,055 63,925	59 60
37,753 58,873	630,850 500,083	602,088 802,150	788,321 510,408	41,570 39,721	6,570 28,104		88,550 900	15,025		21,440 210,067	61 62
20,075 1,058	340,350 26,100	574,470 50,005	4,284 8,785	1,700 2,030		500			529,511 18,530	38,388 20,450	63 64

MANUFACTURES.

TABLE 6.—CANNING AND PRESERVING, FRUITS AND VEGETABLES, FISH, AND OYSTERS—

STATE OR TERRITORY.	Census	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS AND WAGES.							
				Number.	Salaries.	Total.		Men 16 years and over.		Women 16 years and over.		Children under 16 years.	
						Average number.	Wages.	Average number.	Wages.	Average number.	Wages.	Average number.	Wages.
63 Tennessee.....	1905	15	\$89,525	12	\$10,342	203	\$30,489	67	\$18,197	112	\$10,526	24	\$1,766
64	1900	11	85,824	16	2,043	116	15,216	24	4,992	56	6,539	36	3,685
65 Texas.....	1905	14	72,590	8	4,101	89	11,526	20	4,921	44	4,719	25	1,888
66	1900	11	63,862	6	4,030	125	29,188	28	10,637	66	15,232	31	3,319
67 Utah.....	1905	18	927,862	36	24,735	369	99,390	142	48,739	171	39,804	56	10,847
68	1900	8	304,258	20	8,068	141	37,565	62	26,037	73	10,172	6	1,356
69 Vermont.....	1905	4	84,763	7	4,400	52	15,108	26	10,874	23	3,884	3	350
70	1900	3	68,528	4	4,100	111	21,762	64	15,140	45	6,362	2	260
71 Virginia.....	1905	164	554,979	37	10,816	883	152,287	268	70,295	519	73,400	101	8,592
72	1900	94	234,358	31	4,027	684	87,121	236	41,910	318	34,902	130	10,300
73 Washington.....	1905	52	2,150,884	93	97,734	645	357,683	540	324,442	91	30,705	14	2,536
74	1900	57	2,311,153	122	98,767	2,258	735,768	2,123	710,869	99	19,925	36	4,974
75 West Virginia.....	1905	14	28,204	2	145	71	7,541	16	2,966	55	4,575	14	1,030
76	1900	9	95,260	4	1,475	128	13,108	55	7,858	59	4,220	14	1,030
77 Wisconsin.....	1905	47	2,782,511	159	140,125	1,226	404,707	769	320,114	384	74,850	73	9,743
78	1900	22	654,705	42	32,732	679	118,100	305	80,880	271	30,235	103	6,985
79 All other states.....	1905	13	184,025	7	5,630	121	33,639	49	18,963	56	12,892	16	1,784
80	1900	8	63,085	10	5,120	193	49,152	129	40,274	47	7,230	17	1,648

¹Includes establishments distributed as follows: Alabama, 6; Idaho, 3; New Mexico, 1; Oklahoma, 1; Rhode Island, 1; South Dakota, 1.
²Includes establishments distributed as follows: Alabama, 4; Idaho, 2; New Mexico, 1; Rhode Island, 1.

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COMPARATIVE SUMMARY, BY STATES AND TERRITORIES: 1905 AND 1900—Continued.

Miscellaneous expenses.	Cost of materials used.	VALUE OF PRODUCTS.								
		Total.	Canned vegetables.	Canned fruits.	Dried fruits.	Canned fish.	Smoked fish.	Salted fish.	Oysters.	All other products.
\$7,012	\$150,050	\$240,200	\$105,157	\$31,320						\$53,813
207	37,508	72,007	51,210	10,250	\$650					801
5,330	40,001	84,033	19,705	63,242						1,980
1,435	93,350	104,054	57,713	74,241		\$13,550				19,150
41,207	500,170	801,058	650,500	91,080	400					50,303
0,024	211,270	300,340	271,488	23,281						5,530
14,760	50,703	112,711	111,111							1,000
3,300	83,301	100,184	104,584	1,000						
20,070	608,377	1,013,702	870,005	22,305		58,753		\$32,750		10,080
8,200	373,328	688,400	400,355	30,752	3,435			19,700		35,158
442,083	2,237,200	3,420,013	1,472	105,717	60,100	2,434,005	\$505,740	172,018		75,255
280,270	3,140,707	4,000,150			14,045	3,750,000	225,002	203,801	\$10,535	052,517
1,402	40,381	75,357	57,002	17,005						
2,083	30,328	60,880	30,355	18,330						12,102
200,400	1,028,513	3,100,451	2,732,007			4,855	54,800	193,503		120,170
92,892	571,038	1,043,557	973,954				35,227			34,370
15,450	107,217	214,281	58,550	18,310	35,850	215			100,000	1,350
2,710	47,800	117,007	21,153	5,200	1,040	2,100			80,000	0,815

Of the total value of products of the canning and preserving industry for the United States, amounting to \$108,505,471 in 1905, the largest item was canned vegetables, the value of which was \$45,262,148, or 41.7 per cent of the total. Canned and dried fruits were next, with a value of \$27,308,826. The value of fish amounted to \$25,547,075, of which canned fish amounted to \$16,983,779, smoked fish to \$2,362,740, and salted fish to \$6,200,556. The value of oysters canned was \$3,799,412. Under the head of "all other products" are included such products as are not properly classed under any of the other heads and which amounted to \$6,588,010 in 1905. All items for 1905 show a substantial increase over 1900 excepting "all other products," which shows a decrease. Canned vegetables exhibit the greatest actual increase, from \$28,734,598 in 1900 to \$45,262,148 in 1905, a gain of \$16,527,550. Canned fruits made a slight gain, while dried fruits increased from \$4,757,005 to \$15,664,784, or more than three times the amount reported in 1900.

In connection with these figures a difference in the method of collecting the statistics for dried fruits in 1905 and 1900 must be noted. In 1905 the value of dried fruits for California amounted to \$13,800,601, or over 88 per cent of the total for the country. In this state practically all fruits dried or evaporated on fruit farms are rehandled by packing houses operated independently of such farms, in some instances being sub-

jected to a further process of preservation before being packed for market. In 1900 all fruits preserved on farms were classed as agricultural products and, to avoid duplication, these were not included in the report for manufactures. In 1905 there was no agricultural census, and the Bureau of the Census decided that a complete report of the production of dried fruit could best be secured by applying to the packing and shipping houses direct, instead of trying to secure the information from all the small establishments. In pursuing this method, a class of fruit which in 1900 was included under agriculture, was in 1905 classed as a product of manufacture, and so the figures indicate a greater increase than has actually occurred, and are not strictly comparable with those for 1900.

The value of canned fish increased from \$14,051,559 to \$16,983,779; smoked fish, from \$957,741 to \$2,362,740; and salted fish, from \$5,193,627 to \$6,200,556. The value of oysters canned shows an increase of over 84 per cent, a value of \$3,799,412 being reported in 1905 as compared with \$2,054,800 in 1900. The leading state in total value of products in 1905 for all classes was California, for which \$24,826,128 was reported. New York was second with \$12,910,755, and Maryland third with \$12,705,511. California held first rank also in 1900 with products valued at \$14,290,261. Maryland was second with \$14,241,763, and New York third with \$9,173,190.

CANNING AND PRESERVING, FRUITS AND VEGETABLES.

In Table 7 the statistics for the establishments engaged in canning and preserving fruits and vegetables are presented with comparisons by census periods from 1870 to 1905 showing the percentages of increase for each period.

TABLE 7.—CANNING AND PRESERVING, FRUITS AND VEGETABLES—COMPARATIVE SUMMARY, WITH PER CENT OF INCREASE: 1870 TO 1905.

	CENSUS.					PER CENT OF INCREASE.			
	1905 ¹	1900	1890	1880	1870	1900 to 1905	1890 to 1900	1880 to 1890	1870 to 1880
Number of establishments.....	2,261	1,813	886	411	97	24.7	104.6	115.6	323.7
Capital.....	\$47,629,497	\$27,795,621	\$15,315,185	\$3,247,488	\$2,335,926	71.4	81.5	85.7	253.1
Salaries of officials, clerks, etc., number.....	2,653	1,747	1,119	(²)	(²)	51.9	56.1	.....	.....
Salaries.....	\$2,241,788	\$1,271,508	\$592,390	(²)	(²)	78.3	114.6	.....	.....
Wage-earners, average number.....	39,988	37,189	49,792	31,905	5,869	7.5	25.3	56.0	443.6
Total wages.....	\$10,428,521	\$8,251,471	\$4,651,317	\$2,679,960	\$771,643	26.4	77.4	73.6	247.3
Men 16 years and over.....	10,710	13,914	18,409	10,638	1,658	20.5	24.7	73.6	541.6
Wages.....	\$5,902,779	\$4,245,168	\$2,488,328	(²)	(²)	39.0	70.6	.....	.....
Women 16 years and over.....	20,438	20,169	25,714	15,463	3,434	1.3	21.6	66.3	350.3
Wages.....	\$4,176,780	\$3,677,253	\$2,000,848	(²)	(²)	13.6	83.8	.....	.....
Children under 16 years.....	2,790	3,106	5,579	5,804	777	10.2	44.3	13.9	647.0
Wages.....	\$348,962	\$329,050	\$162,141	(²)	(²)	6.1	102.9	.....	.....
Miscellaneous expenses.....	\$5,275,610	\$2,216,495	\$1,289,681	(²)	(²)	138.0	71.9	.....	.....
Cost of materials used.....	\$51,582,460	\$37,382,541	\$18,665,163	\$12,051,293	\$3,094,846	38.5	100.3	54.9	286.4
Value of products.....	\$78,142,022	\$56,427,412	\$29,882,416	\$17,599,576	\$5,425,077	62.0	89.0	69.7	224.4
Fruits and vegetables.....	\$72,570,974	\$44,802,665	(²)	(²)	(²)	62.0	.....	.....	.....
Other products.....	\$5,571,048	\$11,624,747	(²)	(²)	(²)	452.1	.....	.....	.....

¹ Exclusive of the statistics of 43 establishments engaged primarily in the manufacture of other products. These establishments packed fruits and vegetables to the value of \$715,920.

² Includes proprietors and firm members, with their salaries; number only reported in 1900 and 1905, but not included in this table.

³ Not reported separately.

⁴ Decrease.

⁵ Not reported.

At the census of 1870, the first which included the statistics of canning and preserving fruits and vegetables, the number of establishments was 97 and the value of products \$5,425,677. In 1880 the number of establishments reported was 411, an increase over 1870 of 323.7 per cent, and the value of products \$17,599,576, an increase of 224.4 per cent. In 1890 the number of establishments had increased to 886 and the value of products to \$29,862,416. While the greatest percentages of increase in number of establishments and value of products between any consecutive census years were from 1870 to 1880, the greatest absolute increase in these items was from 1890 to 1900. During this time the number of establishments increased 927, and the increase in value of products amounted to \$26,564,996. The number of wage-earners in 1900 as compared with 1890 showed a decrease of 12,573. As previously stated this decrease is due to the difference in the methods employed at the two censuses in computing the average number of wage-earners.

During the five years from 1900 to 1905 there has been a considerable increase in every item except number of children wage-earners, which decreased 10.2 per cent. While the increase in value of products is not so large as that reported during the decade from 1890 to 1900, it represents the growth of the industry during but five years and is, therefore, proportionately much greater, indicating a more rapid development of the canning industry during the past five years than during any similar period since its foundation in this country.

The size of the fruit and vegetable canning establishments in 1905 varied greatly, ranging, when measured by value of products, from \$500 to more than \$1,500,000. By using the number of establishments as a divisor and the various items as dividends, we find that the average cannery had a capital of \$21,066, gave employment to an average of 18 people whose pay amounted to \$4,612, and produced canned goods to the value of \$34,561. In 1900 the average establishment showed a capital of \$15,331, a force of 21 employees receiving \$4,551 in wages and salaries, and a product of \$31,124. This shows that the average establishment in 1905 had increased its capital \$5,735, and its value of products \$3,437 since 1900. While the number of wage-earners in an average establishment was 3 less in 1905 than in 1900, the amount paid them was \$61 greater, showing that there has been an

increase in the wages paid in this industry during the past five years.

Although some establishments, at which fruits and vegetables are packed during the summer and oysters during the winter, are running the greater part of the year, the strict fruit and vegetable canning establishments are operated only during a part of the year. The time in operation varies according to the locality and the kind of goods packed. While some plants are able to commence the canning of early peas and small fruits in the latter part of May, and others continue the packing of apples into December, the busy season for most comes during the months of July, August, September, and October, September being the month of greatest activity. A comparatively small number of operatives are also employed during the winter months in labeling, wrapping, and packing—preparing the product for shipping—and in many factories where they manufacture their own cans the can-makers are employed throughout the year.

Table 8 shows the average number of wage-earners (men, women, and children) employed in canning and preserving fruits and vegetables during each month in the year.

TABLE 8.—Canning and preserving, fruits and vegetables—average number of wage-earners for each month: 1905.

January.....	5,168	July.....	47,823
February.....	4,739	August.....	103,035
March.....	5,650	September.....	132,828
April.....	7,465	October.....	87,141
May.....	13,203	November.....	30,320
June.....	28,800	December.....	13,609

This statement shows that the average number of wage-earners employed for the different months varied from 4,739 in February to 132,828 in September. While the greatest average number for any month was 132,828, there were 172,026 wage-earners employed during the period of greatest activity. In addition to these, 2,653 salaried officials were also employed. Of the total cost of materials entering into the product, \$27,669,626 was paid for raw materials, which consisted mainly of farm products, thus giving employment to a great number of farm laborers besides furnishing a market for the produce of thousands of farms.

Table 9 is a comparative summary, by states, arranged geographically, of the totals for the canning and preserving of fruits and vegetables as returned at the censuses of 1900 and 1905.

TABLE 9.—CANNING AND PRESERVING, FRUITS AND VEGETABLES—COMPARATIVE SUMMARY, BY STATES AND GEOGRAPHIC DIVISIONS: 1905 AND 1900.

STATE OR TERRITORY.	Census.	Number of establishments.	Capital.	WAGE-EARNERS AND WAGES.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Average number.	Wages.			
United States.....	1905	2,261	\$47,629,497	39,988	\$10,428,521	\$5,275,619	\$51,582,460	\$78,142,022
	1900	1,813	27,795,621	37,189	8,251,471	2,216,496	37,382,541	56,427,412
North Atlantic division.....	1905	755	13,809,641	9,600	2,666,347	1,352,728	10,024,538	16,885,639
	1900	702	9,604,319	9,251	2,304,231	693,840	8,825,977	14,163,391
Maine.....	1905	77	1,213,027	733	215,756	189,616	1,028,876	1,891,790
	1900	59	865,825	904	203,509	43,119	762,102	1,335,671
New Hampshire.....	1905	4	25,738	15	3,929	3,461	10,493	20,947
	1900	3	21,642	19	5,957	270	21,111	29,964
Vermont.....	1905	4	84,763	52	15,108	14,759	59,763	112,711
	1900	3	68,528	111	21,762	3,390	83,361	166,184
Massachusetts.....	1905	5	97,800	84	35,797	2,798	116,255	165,804
	1900	9	48,375	139	39,945	7,392	384,600	531,545
Connecticut.....	1905	5	88,600	71	15,219	1,194	28,245	50,457
	1900	5	91,463	100	24,967	1,985	81,887	124,280
New York.....	1905	549	9,806,857	6,618	1,903,983	953,366	6,807,832	11,539,397
	1900	511	6,649,059	5,518	1,462,820	495,478	5,592,462	8,975,321
New Jersey.....	1905	59	1,718,192	1,558	348,156	155,091	1,432,209	2,204,365
	1900	73	1,429,221	1,992	422,092	83,418	1,401,101	2,199,176
Pennsylvania.....	1905	52	774,664	469	128,399	32,443	540,865	841,168
	1900	39	520,206	468	123,179	58,788	499,353	801,250
South Atlantic division.....	1905	643	8,496,906	10,955	2,082,923	741,675	10,663,573	14,973,558
	1900	463	6,541,786	11,132	2,032,103	469,517	11,862,096	16,380,226
Delaware.....	1905	59	1,005,028	999	186,511	66,643	1,030,640	1,456,185
	1900	51	966,660	1,437	226,149	27,169	1,083,142	1,570,790
Maryland.....	1905	384	6,910,888	8,978	1,743,656	645,873	8,898,527	12,466,549
	1900	276	5,182,330	8,707	1,686,579	426,897	10,270,082	13,993,663
Virginia.....	1905	159	512,979	829	136,531	23,669	647,895	910,859
	1900	88	218,533	637	77,576	7,289	342,689	535,900
West Virginia.....	1905	14	28,204	71	7,541	1,462	49,381	75,357
	1900	9	95,200	128	13,108	2,983	39,328	66,886
North Carolina.....	1905	18	32,607	57	6,889	3,342	24,637	44,741
	1900	19	30,340	78	10,736	414	44,494	64,400
South Carolina.....	1905	5	2,540	10	1,044	233	3,489	6,240
	1900	12	23,862	64	7,410	503	15,169	28,565
Georgia.....	1905	4	4,660	11	751	453	9,004	13,627
	1900	8	24,801	81	10,545	4,202	67,192	120,022
North Central division.....	1905	519	13,930,802	10,590	2,751,162	1,574,441	11,925,238	19,826,170
	1900	387	6,030,562	7,997	1,643,572	593,610	6,528,900	11,053,195
Ohio.....	1905	77	1,768,001	1,577	400,061	163,735	1,725,473	2,840,359
	1900	70	910,670	1,608	306,393	73,781	1,197,269	1,941,398
Indiana.....	1905	96	3,360,030	3,102	757,187	565,789	3,097,161	5,086,896
	1900	60	1,205,494	2,002	386,467	165,755	1,520,088	2,589,908
Illinois.....	1905	62	1,693,735	1,141	384,340	190,087	1,894,509	3,111,566
	1900	60	1,251,977	1,268	324,841	124,563	1,396,794	2,301,650
Michigan.....	1905	114	1,307,940	1,342	321,552	179,056	1,045,541	1,747,981
	1900	97	497,812	797	170,052	29,622	534,189	884,297
Wisconsin.....	1905	40	2,670,510	1,196	391,631	248,942	1,709,797	2,847,127
	1900	16	650,115	676	117,090	61,887	543,496	1,007,765
Minnesota.....	1905	16	245,320	147	39,174	13,434	145,146	253,985
	1900	4	43,650	45	8,523	1,452	17,929	49,200
Iowa.....	1905	40	1,985,493	1,163	292,512	154,744	1,594,306	2,779,804
	1900	26	1,027,321	699	184,710	63,185	767,231	1,359,958
Missouri.....	1905	62	411,886	530	80,590	21,844	353,368	508,913
	1900	44	295,000	625	107,672	21,318	346,866	594,656
Nebraska.....	1905	8	356,657	292	62,065	28,228	308,966	559,489
	1900	5	123,623	161	21,686	10,325	130,573	210,688
Kansas.....	1905	4	131,230	100	22,050	10,582	50,881	89,750
	1900	5	30,300	116	17,148	11,722	68,465	113,676
South Central division.....	1905	113	497,225	819	123,323	30,526	493,430	805,853
	1900	66	225,899	610	103,269	12,639	252,591	524,348
Kentucky.....	1905	9	188,982	316	40,461	9,405	185,074	288,516
	1900	8	95,600	231	36,903	10,100	75,346	192,787
Tennessee.....	1905	15	89,525	203	30,489	7,912	150,656	240,296
	1900	11	35,824	116	15,216	207	37,598	72,007

TABLE 9.—CANNING AND PRESERVING, FRUITS AND VEGETABLES—COMPARATIVE SUMMARY, BY STATES AND GEOGRAPHIC DIVISIONS: 1905 AND 1900—Continued.

STATE OR TERRITORY.	Census.	Num- ber of estab- lish- ments.	Capital.	WAGE-EARNERS AND WAGES.		Miscellane- ous expenses.	Cost of materials used.	Value of products.
				Average number.	Wages.			
South Central division—Continued.								
Alabama.....	1905	5	\$6,675	13	\$1,724	\$205	\$4,416	\$8,456
	1900	3	7,585	16	2,380	135	3,418	7,947
Mississippi ¹	1905	3	15,347	4	626	431	2,313	3,350
Arkansas.....	1905	67	124,106	104	38,497	7,243	104,310	180,293
	1900	34	33,038	136	21,942	952	50,054	100,503
Texas.....	1905	14	72,500	80	11,520	5,330	46,001	84,933
	1900	10	53,852	111	26,828	1,245	85,275	151,104
Western division.....	1905	226	10,853,873	7,982	2,792,436	1,574,015	18,451,213	25,606,599
	1900	189	6,260,000	8,161	2,158,199	444,680	9,800,578	14,272,211
Idaho ²	1905	3	52,700	34	14,350	3,440	33,895	64,600
Colorado.....	1905	7	302,050	212	70,252	26,210	251,600	474,436
	1900	7	277,325	200	62,561	14,508	223,454	343,304
Utah.....	1905	18	927,862	309	90,300	41,267	506,170	801,058
	1900	8	304,258	141	37,565	6,024	211,279	300,349
Washington.....	1905	11	68,350	60	25,600	6,475	94,052	173,289
	1900	18	78,627	44	12,484	2,077	24,781	63,141
Oregon.....	1905	20	207,255	160	41,862	23,548	165,002	282,328
	1900	17	121,355	120	18,070	4,543	79,200	141,498
California.....	1905	107	9,205,050	7,138	2,531,883	1,473,075	17,300,480	23,806,988
	1900	130	4,478,435	7,641	2,027,519	416,738	9,300,774	13,423,829
Not distributed by states or divisions.....	1905	5	41,050	42	12,330	2,234	24,468	44,203
	1900	0	37,055	38	10,007	2,309	13,309	34,041

¹ None reported in 1900.² Not reported separately in 1900.³ Includes establishments distributed as follows: Rhode Island, 1; South Dakota, 1; Louisiana, 1; Oklahoma, 1; New Mexico, 1.⁴ Includes establishments distributed as follows: Rhode Island, 1; Florida, 2; Idaho, 2; New Mexico, 1.

The most significant fact revealed by this table is that the South Atlantic division fell from first place, according to value of products, in 1900 to fourth in 1905. The South Atlantic states comprise the section where the real birth and early growth of the canned goods industry took place, and until the present census the total value of products for this section has been larger than for any other geographic division. From 1900 to 1905, however, the total value of products from this group of states showed a loss of \$1,406,668.

This loss is, probably, entirely due to a decrease in the value of cans manufactured for sale rather than in the value of fruits and vegetables packed, for canning houses in Baltimore, which produced cans for sale to the value of \$1,846,820 in 1900, manufactured products of this class to the value of only \$414,621 in 1905, a decrease of \$1,432,199.

While the product from the South Atlantic division showed a slight decrease, that from the Western division increased from \$14,272,211 to \$25,606,599, giving this group of states first rank in production. The gain was principally in California, where the total value of products reported increased from \$13,423,829 in 1900 to \$23,809,988 in 1905.

The value of products of this industry in the North Central division increased from \$11,053,195 in 1900 to \$19,826,170 in 1905, advancing this division from fourth to second rank during the five years. The

growth in this group was general, not being confined to any one state. The 6 leading states in this division, ranked by value of products, were Indiana, increasing from \$2,589,908 in 1900 to \$5,086,896 in 1905; Illinois, from \$2,301,650 in 1900 to \$3,111,866 in 1905; Wisconsin, from \$1,007,765 in 1900 to \$2,847,127 in 1905; Ohio, from \$1,941,398 in 1900 to \$2,840,359 in 1905; Iowa, from \$1,359,958 in 1900 to \$2,779,804 in 1905; and Michigan, from \$884,297 in 1900 to \$1,747,981 in 1905. The other states in this division made smaller increases, and the total value of products reported for each was less than \$1,000,000.

The increase in value of products in the North Atlantic division was from \$14,163,391 in 1900 to \$16,885,639 in 1905, which left the division third in rank, as it was in 1900. The 3 leading states in this group, ranked according to value of products in 1905, were New York, New Jersey, and Maine. The total production reported for New York increased from \$8,975,321 in 1900 to \$11,589,397 in 1905; for New Jersey, from \$2,199,176 in 1900 to \$2,204,365 in 1905; and for Maine, from \$1,335,671 in 1900 to \$1,891,790 in 1905.

More than 83 per cent of the total value of products for the South Atlantic division was reported from Maryland, the value of products for this state amounting to \$13,993,663 in 1900 and \$12,466,549 in 1905. For Delaware, which ranked second in this group, \$1,570,790 was reported in 1900 and \$1,456,185 in

1905, and for Virginia, which ranked third, \$535,900 was reported in 1900 and \$910,859 in 1905.

The largest number of establishments was reported for the North Atlantic division and was 755, an increase of 53 over 1900. Of these, 549 were reported for New York, or 38 more than in 1900. The South Atlantic states were next, with 643 in 1905 and 463 in 1900. For Maryland there were reported 384 establishments, an increase of 108 over 1900, this being the greatest increase in number of establishments shown by any of the states.

The amount of capital invested was greatest in the North Central states, being \$13,930,802, an increase over 1900 of \$7,894,240, or 130.8 per cent, which advanced this division from third place in 1900 to first in 1905. The capital was rather evenly distributed through the several states. The 3 leading states in respect to amount of capital in 1905 were Indiana with \$3,360,030, Wisconsin with \$2,670,510, and Iowa with \$1,985,493. The second largest investment of capital was reported for the North Atlantic division in 1905, the amount being \$13,809,641, as compared with \$9,694,319 in 1900. Of these amounts, \$9,806,857 was reported for New York in 1905 and \$6,649,059 in 1900; \$1,718,192 for New Jersey in 1905 and \$1,429,221 in 1900; \$1,213,027 for Maine in 1905 and \$865,825 in 1900. The third largest investment in 1905 was reported for the Western states, amounting to \$10,853,873, an increase of \$5,593,873, or 106.3 per cent, over that of 1900. Of this amount, \$9,295,056 was reported for California, an investment more than double that reported for this state in 1900, and 85.6 per cent of the total for the Western division in 1905. In the South Atlantic division, which ranked fourth, the capital invested was \$8,496,906 in 1905 and \$6,541,786 in 1900. Of these amounts, \$6,910,888 was reported for the state of Maryland in 1905 and \$5,182,330 in 1900.

For the South Atlantic division the greatest average number of wage-earners was reported at both censuses; the number decreased, however, from 11,132 in 1900 to 10,955 in 1905. The North Central states were second in rank, with 10,590, an increase of 2,593 over the number reported in 1900. The North Atlantic states were third, with 9,600, as compared with 9,251 in 1900. The Western states were fourth, there being 7,982 wage-earners reported in 1905 and 8,161 in 1900. While the number of wage-earners decreased 179 in this group, the wages increased \$634,237. In the North Central states, which ranked second in amount of wages paid, the wages increased from \$1,643,572 in 1900 to \$2,751,162 in 1905, a gain of 67.4 per cent, while the average number of wage-earners increased but 32.4 per cent. In the North Atlantic states, which were third in amount of wages paid, this item in 1905 amounted to \$2,666,347, as compared with \$2,304,231 in 1900, a gain of 15.7 per cent, though the gain in number of employees was but 3.8 per cent. Also in the South Atlantic states, which were fourth, the average number of wage-earners decreased 1.6 per cent, but the wages increased from \$2,032,103 to \$2,082,923, or 2.5 per cent. In the South Central states the average number of wage-earners increased 34.3 per cent and the wages only 19.4 per cent during the period.

Table 10 shows the rank of the several states and territories in 1900 and 1905, by number of establishments, capital, wage-earners, wages, total value of products, value of canned vegetables, of canned fruits, and of dried fruits. The data from which the table is constructed are given in Table 9, which presents a comparative summary of the fruit and vegetable canning and preserving industry for 1900 and 1905, and in Table 15, which presents the detailed statistics for 1905.

TABLE 10.—CANNING AND PRESERVING, FRUITS AND VEGETABLES—RANK OF STATES AND TERRITORIES, BY NUMBER OF ESTABLISHMENTS, CAPITAL, WAGE-EARNERS, WAGES, AND VALUE OF PRODUCTS: 1905 AND 1900.

STATE.	RANK ACCORDING TO—															
	Number of establishments.		Capital.		Wage-earners and wages.				Value of products.							
					Average number.		Wages.		Total.		Canned vegetables.		Canned fruits.		Dried fruits.	
	1905	1900	1905	1900	1905	1900	1905	1900	1905	1900	1905	1900	1905	1900	1905	1900
California.....	3	3	2	3	2	2	1	1	1	2	8	3	1	1	1	1
Maryland.....	2	2	3	2	1	1	3	2	2	1	1	1	2	2	.....	.....
New York.....	1	1	1	1	3	3	2	3	3	3	2	2	3	3	2	2
Indiana.....	6	8	4	6	4	4	4	5	4	4	3	4	15	18	.....	10
Illinois.....	10	8	9	5	10	8	7	6	5	5	4	6	21	15	5	4
Wisconsin.....	15	19	5	11	8	12	6	13	6	11	6	11	.....	.....	.....	.....
Ohio.....	7	7	7	9	5	6	5	7	7	7	7	7	11	9	13	0
Iowa.....	15	15	6	7	9	11	10	10	8	9	5	9	36	24	.....	16
New Jersey.....	12	6	8	4	6	5	8	4	9	6	9	5	6	7	.....	.....
Maine.....	7	10	11	10	13	9	11	9	10	10	10	10	7	13	.....	.....
Michigan.....	5	4	10	13	7	10	9	11	11	12	13	17	4	4	3	3
Delaware.....	12	11	12	8	11	7	12	8	12	8	11	8	14	5	.....	.....
Virginia.....	4	5	15	17	12	13	13	15	13	15	12	14	17	12	.....	14
Pennsylvania.....	14	13	14	12	15	15	14	12	14	13	14	13	13	11	0	6
Utah.....	18	25	13	14	16	10	15	18	15	18	15	15	9	10	12	.....
Nebraska.....	26	20	17	18	18	18	18	24	16	19	16	18	22	21	.....	18
Missouri.....	10	12	16	15	14	14	10	14	17	14	17	12	27	14	10	12
Colorado.....	27	28	18	16	19	17	17	16	18	17	18	16	16	26	.....	.....
Kentucky.....	25	25	21	20	17	16	20	19	19	20	20	19	31	23	.....	11
Oregon.....	17	18	20	19	22	22	19	25	20	23	28	32	5	8	8	7
Minnesota.....	20	32	19	27	23	32	21	32	21	32	19	27	33	.....	.....	.....
Tennessee.....	21	21	25	28	20	24	24	27	22	28	21	25	18	19	.....	17
Arkansas.....	8	14	23	20	21	21	22	22	23	27	27	31	25	.....	4	5
Washington.....	24	17	20	23	28	33	25	20	24	31	41	.....	8	6	.....	8
Massachusetts.....	28	23	24	20	26	20	23	17	25	10	24	24	12	32	.....	.....
Vermont.....	32	33	27	24	30	26	28	23	20	21	22	20	.....	31	.....	.....
Kansas.....	32	20	22	31	24	24	26	26	27	26	23	21	35	29	.....	.....
Texas.....	22	22	28	25	25	20	30	20	28	22	30	23	10	10	.....	.....
West Virginia.....	22	23	32	21	27	23	31	28	29	29	25	28	20	20	.....	.....
Idaho.....	36	36	30	30	31	30	20	37	30	39	31	.....	24	.....	7	15
Connecticut.....	28	20	26	22	27	28	27	21	31	24	26	22	26	17	.....	.....
North Carolina.....	18	16	31	30	20	30	32	30	32	30	20	26	19	22	.....	.....
New Hampshire.....	32	33	33	34	32	35	34	35	33	33	32	30	30	25	11	13
Oklahoma.....	38	.....	36	.....	33	.....	33	.....	34	.....	33	.....	.....	.....	.....	.....
Georgia.....	32	25	41	32	35	20	41	31	35	25	42	34	23	6	.....	.....
New Mexico.....	38	38	40	35	36	34	30	33	30	35	34	29	.....	33	.....	.....
Alabama.....	28	33	30	38	34	30	37	36	37	30	37	35	29	27	.....	.....
Rhode Island.....	38	38	37	37	37	37	35	38	38	38	39	37	28	.....	.....	.....
South Carolina.....	28	20	42	33	36	31	38	34	30	34	36	33	32	28	.....	.....
South Dakota.....	38	.....	35	.....	37	.....	40	.....	40	.....	35	.....	.....	.....	.....	.....
Mississippi.....	30	.....	34	.....	38	.....	42	.....	41	.....	38	.....	37	.....	.....	.....
Louisiana.....	38	.....	38	.....	38	.....	39	.....	42	.....	40	.....	34	.....	.....	.....
Florida.....	.....	30	.....	30	.....	38	.....	30	.....	37	.....	30	.....	30	.....	.....

The 5 leading states, ranked according to value of products reported at the census of 1905, were California, Maryland, New York, Indiana, and Illinois, in the order named. They occupied the same relative position in 1900 with the exception of Maryland and California, whose places were interchanged. California advanced from second place in value of products in 1900 to first in 1905, and from third to second in capital. At both censuses this state was third in number of establishments, second in number of employees, and first in amount of wages paid. Maryland dropped from second place in 1900 to third in 1905 in capital, was second in number of establishments at both censuses, was first in number of wage-earners, third in amount of wages paid, and second in value of products in 1905. New York was first at both censuses in number of establishments and capital, third in number of wage-earners and value of products, and advanced from third to second place in wages paid. Indiana ranked sixth in number of es-

tablishments and fourth in capital, wage-earners, wages, and value of products in 1905. Illinois was ninth in number of establishments and capital, tenth in wage-earners, seventh in wages, and fifth in value of products in 1905.

The canning of vegetables is the most important branch of the canning industry, forming 36.1 per cent of the total value of products in 1900 and 41.7 per cent in 1905. In the value of products for this part of the industry Maryland ranked first and New York second, both in 1900 and 1905. Indiana was fourth in 1900 and third in 1905, Illinois was sixth in 1900 and fourth in 1905, and California dropped from third in 1900 to eighth in 1905.

The climatic conditions in southern California have made the state famous for the fine quality of its fruits. The natural outcome has been to give this state first rank in the value of both canned and dried fruits produced. In 1900 California produced 64.9 per cent of the total value of canned and 61.2 per cent of the total

value of dried fruits reported in the United States. In 1905, 59.9 per cent of the total value of canned fruits for the country were reported from this state, while its percentage of the total value of dried fruits was increased to 88.1 per cent of the total for the country. Maryland held second rank in value of fruit canned, and New York ranked third in value of canned and second in value of dried fruits.

In the preparation of canned goods for the various classes of trade it is necessary to use different sizes of cans for the same product. The standard sizes in use are the number 1, number 2, and number 3—also called 1-pound, 2-pound, and 3-pound—and the gallon cans. In the compilation of the Census statistics it has been necessary to reduce the different sizes to a standard, the standard adopted being the size which is most generally used for each kind of goods. The unit of measure used is the "case" of 24 cans. In presenting the figures for beans, corn, peas, berries, cherries, and plums the standard of size is the number 2 can and the unit of measure a case of 24 such cans. The number 3 can is used as the standard for pumpkins, sweet potatoes, tomatoes, apples, apricots, peaches, and pears; also for fruits and vegetables other than those above mentioned, and grouped as "all other vegetables" and "all other fruits," the unit for these being a case of 24 number 3 cans. In making the reduction to these sizes, a case of 12 one-gallon cans is figured as the equivalent of two cases of number 2 cans, and two cases of number 3 are considered as the equivalent of three cases of number 2 cans. In the four succeeding tables the number of cases packed and the total value of four of the leading canned fruits and vegetables are given by states. By referring to Table 15 similar information can be obtained for any of the other fruits and vegetables that are classed separately.

TABLE 11.—Quantity and value of tomatoes packed, by states: 1905.

(Canning season of 1904.)

STATE.	Cases.	Value.
United States.....	9,301,264	\$13,885,160
Maryland.....	3,638,363	4,076,098
Indiana.....	1,156,143	1,820,876
New Jersey.....	796,724	1,273,426
Delaware.....	679,080	1,007,595
Virginia.....	563,145	747,838
California.....	541,776	846,805
Ohio.....	350,892	535,751
Utah.....	312,430	566,578
Missouri.....	280,280	413,886
New York.....	184,894	389,036
Kentucky.....	126,520	200,985
Michigan.....	113,670	188,429
Pennsylvania.....	90,760	162,071
Tennessee.....	89,821	132,300
Colorado.....	75,366	147,095
Illinois.....	68,501	100,478
Iowa.....	60,444	102,050
West Virginia.....	39,067	55,495
Arkansas.....	24,092	35,331
Kansas.....	21,505	30,391
All other states.....	80,882	152,650

In packing tomatoes Maryland easily led, reporting more than three times the number of cases packed in

Indiana, the second highest state, and 39.1 per cent of the total of 9,301,264 cases packed in the United States. The 5 leading states, in the order named, with the number of cases and value reported for each were: Maryland, 3,638,363 cases, valued at \$4,976,098; Indiana, 1,156,143 cases, valued at \$1,820,876; New Jersey, 796,724 cases, valued at \$1,273,426; Delaware, 679,080 cases, valued at \$1,007,595; and Virginia, 563,145 cases, valued at \$747,838. The other states producing over 100,000 cases each are California, Ohio, Utah, Missouri, New York, Kentucky, and Michigan, in the order named.

TABLE 12.—Quantity and value of corn packed, by states: 1905.

(Canning season of 1904.)

STATE.	Cases.	Value.
United States.....	11,209,397	\$15,952,066
Iowa.....	1,941,520	2,610,178
Illinois.....	1,773,085	2,403,720
Maryland.....	1,600,802	2,021,627
New York.....	1,444,344	2,272,682
Ohio.....	1,280,006	1,736,503
Maine.....	703,295	1,525,039
Indiana.....	678,950	858,465
Nebraska.....	394,826	533,400
Wisconsin.....	388,000	571,195
Pennsylvania.....	351,045	453,170
Minnesota.....	185,070	248,712
Delaware.....	152,000	207,810
Michigan.....	100,370	103,761
Vermont.....	42,839	90,468
Kansas.....	39,519	49,423
Missouri.....	38,440	53,640
Virginia.....	17,414	23,707
All other states.....	50,363	70,440

Table 12 indicates a total production of 11,209,397 cases of corn, valued at \$15,952,066. The first 5 states vary but little in the number of cases reported. Ranked according to number of cases packed they were Iowa, with 1,941,520 cases, valued at \$2,610,178; Illinois, with 1,773,085 cases, valued at \$2,403,720; Maryland, with 1,600,802 cases, valued at \$2,021,627; New York, with 1,444,344 cases, valued at \$2,272,682; and Ohio, with 1,280,006 cases, valued at \$1,736,503. These 5 states produced 8,039,757 cases, or 71.7 per cent of the total production for the United States, and the value of their product was \$11,050,710. The next seven states in order of production were Maine, Indiana, Nebraska, Wisconsin, Pennsylvania, Minnesota, and Delaware.

TABLE 13.—Quantity and value of peas packed, by states: 1905.

(Canning season of 1904.)

STATE.	Cases.	Value.
United States.....	4,004,492	\$7,028,701
New York.....	1,509,020	2,593,201
Wisconsin.....	1,226,538	2,011,220
Maryland.....	622,203	1,010,131
Indiana.....	425,814	644,430
Michigan.....	263,423	471,613
Delaware.....	131,147	178,729
New Jersey.....	118,200	245,270
California.....	68,142	144,033
Ohio.....	64,503	141,865
Utah.....	41,034	80,155
Pennsylvania.....	39,790	64,350
Iowa.....	29,754	47,615
Illinois.....	22,708	35,309
Virginia.....	12,500	24,500
All other states.....	118,038	222,825

Table 13 shows that during the season of 1904, 4,694,492 cases of peas, having a value of \$7,928,791, were packed in the United States. New York produced the greatest amount, 1,509,629 cases, valued at \$2,598,291. Wisconsin was second with 1,226,538 cases, valued at \$2,011,226. These 2 states produced 2,736,167 cases, or 58.3 per cent of the total production for the United States. The other 3 leading states in the order named, with the number of cases reported for each and total value were: Maryland, 622,263 cases, valued at \$1,019,131; Indiana, 425,314 cases, valued at \$644,439; and Michigan, 263,423 cases, valued at \$471,613. Delaware, New Jersey, Colorado (which is included in "all other states"), California, and Ohio followed in the order named.

TABLE 14.—Quantity and value of peaches packed, by states: 1905.

(Canning season of 1904.)

STATE.	Cases.	Value.
United States.....	1,302,876	\$3,804,272
California.....	744,715	2,640,524
Maryland.....	352,244	753,003
Michigan.....	68,269	179,838
Texas.....	30,086	62,980
Utah.....	17,845	43,808
Ohio.....	12,762	35,134
New York.....	10,000	39,300
New Jersey.....	9,767	19,370
All other states.....	57,128	130,147

In the canning of peaches California easily led all the other states, reporting 744,715 cases, valued at \$2,640,524. This amount exceeded the combined production of all other states, being 57.2 per cent of the total for the United States. Maryland ranked second, with 352,244 cases, valued at \$753,003, this quantity being more than five times the number of cases reported for Michigan, which was third, with 68,269 cases, valued at \$179,838. Other states, in order of the number of cases reported, were Texas, Utah, Ohio, New York, and New Jersey.

Table 15 shows the detailed statistics for canning and preserving fruits and vegetables, by states and territories, as returned for 1905. In the preparation of the detailed statistics by states it was found that, in several states where three or more establishments were engaged in the canning industry, there were less than three establishments canning some particular fruit or vegetable, which is shown separately in Table 15. For example, in the state of Colorado, of the seven establishments reporting, but two were engaged in canning fruits, but one in canning corn, and but one in canning peas. To publish the statistics for this state in detail would result in a disclosure of a part of the operations of such establishments. In this and all similar cases the statistics for the state are included in "all other states."

TABLE 15.—CANNING AND PRESERVING, FRUITS AND VEGETABLES—

	United States.	Alabama.	Arkansas.	California.	Connecticut.	Delaware.
1 Number of establishments.....	2,261	5	67	167	5	59
2 Capital:						
3 Total.....	\$47,629,497	\$8,675	\$124,106	\$9,295,056	\$88,000	\$1,005,028
4 Land.....	\$2,687,007	\$475	\$5,370	\$725,331	\$2,725	\$37,373
5 Buildings.....	\$9,144,868	\$1,200	\$37,564	\$1,788,688	\$24,479	\$116,197
6 Machinery, tools, and implements.....	\$10,268,496	\$1,600	\$29,310	\$1,595,468	\$12,830	\$182,746
7 Cash and sundries.....	\$25,529,126	\$3,400	\$51,862	\$5,185,500	\$48,566	\$668,712
8 Proprietors and firm members.....	2,447	13	100	99	4	86
9 Salaried officials, clerks, etc.:						
10 Total number.....	2,653	1	8	485	5	37
11 Total salaries.....	\$2,241,788	\$100	\$1,558	\$639,584	\$2,800	\$18,037
12 Officers of corporations—						
13 Number.....	633			71	1	4
14 Salaries.....	\$710,343			\$186,095	\$600	\$1,975
15 General superintendents, managers, clerks, etc.—						
16 Total number.....	2,020	1	8	414	4	33
17 Total salaries.....	\$1,531,445	\$100	\$1,558	\$452,889	\$2,200	\$16,062
18 Men—						
19 Number.....	1,775	1	8	329	3	31
20 Salaries.....	\$1,431,584	\$100	\$1,558	\$413,592	\$1,900	\$15,520
21 Women—						
22 Number.....	245			85	1	2
23 Salaries.....	\$99,861			\$39,297	\$300	\$542
24 Wage-earners, including pieceworkers, and total wages:						
25 Greatest number employed at any one time during the year.....	172,026	80	1,086	27,505	280	5,889
26 Least number employed at any one time during the year.....	71,388	58	1,000	8,300	111	2,081
27 Average number.....	39,988	13	194	7,138	71	999
28 Total wages.....	\$10,428,521	\$1,724	\$38,497	\$2,531,883	\$15,219	\$186,611
29 Men 16 years and over—						
30 Average number.....	16,760	6	68	2,489	28	384
31 Wages.....	\$5,902,779	\$1,204	\$10,148	\$1,227,180	\$8,354	\$87,474
32 Women 16 years and over—						
33 Average number.....	20,438	3	109	4,390	42	511
34 Wages.....	\$4,176,780	\$295	\$17,408	\$1,258,428	\$6,765	\$87,035
35 Children under 16 years—						
36 Average number.....	2,790	4	17	259	1	104
37 Wages.....	\$348,962	\$225	\$1,941	\$46,275	\$100	\$12,002
38 Average number of wage-earners, including pieceworkers, em-						
39 ployed during each month:						
40 Men 16 years and over—						
41 January.....	3,067			578		40
42 February.....	2,926			524		46
43 March.....	3,563			713		77
44 April.....	4,484			1,070		90
45 May.....	6,797	11		1,470	2	155
46 June.....	12,685	11	6	2,090	1	646
47 July.....	20,686	29	28	4,170	11	175
48 August.....	39,715	15	181	5,497	105	1,095
49 September.....	53,096	3	317	5,180	110	1,487
50 October.....	34,355	3	233	4,430	69	662
51 November.....	13,148		51	2,700	46	142
52 December.....	6,598			1,446	2	93
53 Women 16 years and over—						
54 January.....	1,888			455		
55 February.....	1,694			320		
56 March.....	1,840			320		
57 April.....	2,614			825		
58 May.....	5,855			1,453	5	19
59 June.....	14,410		6	4,141	21	166
60 July.....	23,412	20	45	8,857		90
61 August.....	54,119	10	294	11,757	160	1,052
62 September.....	69,119	3	533	10,167	166	2,845
63 October.....	47,336	3	303	8,146	85	931
64 November.....	16,327		67	4,160	67	61
65 December.....	6,676			2,073		29
66 Children under 16 years—						
67 January.....	213			7		
68 February.....	209			9		
69 March.....	241			6		
70 April.....	367			44		
71 May.....	551			58		
72 June.....	1,774		1	254		39
73 July.....	3,725	24	12	1,049		13
74 August.....	9,201	24	60	950	6	404
75 September.....	10,613		88	419	6	588
76 October.....	5,400		41	191		197
77 November.....	851		2	87		2
78 December.....	335			34		2
79 Miscellaneous expenses:						
80 Total.....	\$5,275,619	\$205	\$7,243	\$1,473,075	\$1,194	\$66,643
81 Rent of works.....	\$149,365	\$40	\$261	\$53,490		\$2,244
82 Taxes, not including internal revenue.....	\$186,762	\$10	\$439	\$41,231	\$166	\$1,743
83 Rent of offices, interest, insurance, and all other sundry	\$4,818,819	\$155	\$6,543	\$1,277,551	\$653	\$62,656
84 expenses not hitherto included.....						
85 Contract work.....	\$120,673			\$100,803	\$375	
86 Materials used:						
87 Aggregate cost.....	\$51,582,460	\$4,416	\$104,810	\$17,399,489	\$28,245	\$1,030,640
88 Principal materials—						
89 Total cost.....	\$29,151,951	\$2,099	\$76,555	\$13,725,556	\$14,581	\$394,197
90 Purchased in raw state.....	\$27,669,626	\$2,099	\$75,553	\$13,214,985	\$14,551	\$389,412
91 Purchased in partially manufactured form.....	\$1,482,325		\$1,002	\$510,571	\$30	\$4,785
92 Fuel.....	\$696,665	\$220	\$5,852	\$88,314	\$1,124	\$13,274
93 Rent of power and heat.....	\$19,116			\$14,175		\$60
94 Mill supplies.....	\$65,903	\$17	\$131	\$9,760	\$140	\$1,219
95 All other materials.....	\$21,235,584	\$2,080	\$21,772	\$3,393,995	\$12,100	\$609,114
96 Freight.....	\$413,211			\$167,689	\$300	\$12,776

CANNING AND PRESERVING.

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DETAILED SUMMARY, BY STATES AND TERRITORIES: 1905.

Illinois.	Indiana.	Iowa.	Kansas.	Maine.	Maryland.	Michigan.	Minnesota.	Mississippi.	Missouri.	
02	00	40	4	77	384	114	10	3	02	1
\$1,693,735	\$3,360,030	\$1,985,403	\$131,230	\$1,213,027	\$6,910,888	\$1,307,040	\$2,532,320	\$15,347	\$411,880	2
\$100,565	\$138,700	\$124,418	\$7,750	\$43,800	\$322,211	\$85,001	\$7,205	\$425	\$15,805	3
\$50,430	\$618,270	\$29,107	\$23,178	\$198,750	\$857,083	\$350,807	\$66,023	\$2,250	\$83,387	4
\$51,460	\$770,158	\$90,000	\$24,401	\$15,800	\$940,376	\$52,608	\$72,087	\$9,700	\$142,503	5
\$679,280	\$1,826,812	\$1,242	\$75,901	\$554,587	\$4,785,218	\$518,404	\$80,315	\$2,972	\$170,101	6
97	37	8	2	80	552	98	0		\$60	7
77	107	82	11	173	383	113	27	3	83	8
\$71,777	\$129,748	\$68,585	\$3,735	\$85,387	\$298,107	\$70,056	\$11,780	\$180	\$15,357	9
15	70	28	7	95	37	41	16		21	10
\$14,760	\$58,620	\$27,459	\$1,360	\$37,707	\$75,265	\$28,030	\$3,010		\$3,430	11
02	127	54	4	78	346	72	11	3	62	12
\$57,027	\$71,110	\$41,135	\$2,375	\$47,500	\$222,002	\$42,020	\$8,770	\$680	\$11,918	13
59	112	40	4	68	315	64	10	3	57	14
\$55,827	\$60,087	\$38,835	\$2,375	\$43,074	\$210,166	\$30,531	\$8,020	\$680	\$11,068	15
3	15	5		10	31	8	1		5	16
\$1,200	\$4,452	\$2,300		\$3,910	\$12,736	\$2,495	\$150		\$250	17
5,550	12,514	6,670	550	5,524	33,508	5,380	651	47	3,331	18
1,440	9,475	2,800	210	1,320	10,480	2,100	604	40	1,780	19
1,141	3,103	1,103	100	733	8,078	1,342	147	4	1,530	20
\$384,340	\$754,187	\$202,512	\$22,050	\$215,750	\$1,743,050	\$321,552	\$30,174	\$620	\$80,500	21
745	1,438	607	42	452	3,100	492	50	1	102	22
\$209,183	\$473,752	\$204,020	\$15,100	\$105,090	\$810,020	\$173,652	\$21,500	\$250	\$37,463	23
350	1,480	388	34	238	4,600	802	50	1	272	24
\$77,787	\$258,733	\$74,920	\$4,870	\$45,128	\$795,686	\$141,030	\$13,320	\$153	\$34,037	25
37	175	108	24	43	1,110	48	20	2	90	26
\$7,370	\$24,702	\$12,683	\$1,981	\$4,020	\$131,150	\$5,901	\$4,204	\$223	\$3,190	27
205	100	44	4	70	804	81	6		4	28
130	206	44	4	83	836	53	0		4	29
130	224	55	5	96	945	90	0		4	30
102	270	90	7	116	1,042	105	14		4	31
244	708	108	20	130	1,758	102	11		4	32
321	1,740	160	41	113	2,570	526	10		4	33
414	1,626	245	40	110	2,455	790	38	2	42	34
1,800	2,814	2,000	94	304	8,325	772	141	8	572	35
2,000	4,081	3,400	140	3,507	9,824	1,280	315	2	783	36
1,610	3,000	1,518	109	506	6,402	1,240	125		474	37
533	747	214	10	250	1,532	684	23		30	38
203	288	90	0	41	936	103	13		10	39
70	106	10		65	480	14				40
44	108	10		57	517	7				41
42	115	10		90	608	11				42
32	126	10		83	883	15				43
42	600	30		64	2,480	21				44
50	1,261	70	7	56	3,945	704				45
71	625	87	50	40	4,220	1,079	36		40	46
532	3,002	1,273	87	178	14,123	1,023	105	12	907	47
1,050	5,952	2,143	131	1,053	16,370	2,502	375		1,340	48
1,050	4,734	805	125	712	10,200	2,180	114		852	49
217	700	81	7	370	1,758	1,182	17		35	50
87	270	31	1	88	633	100	1			51
10	40				131					52
2	51				132					53
2	50				150					54
2	61				228					55
8	80				233	7	6			56
8	100	11			632	90				57
4	150	23	01	2	1,015	117	19		6	58
85	330	400	09	118	3,645	87	06	24	386	59
175	530	655	91	300	4,200	115	184		471	60
144	432	120	40	82	2,310	88	30		271	61
2	88	18		5	283	54			18	62
2	62	2			165	12				63
\$100,087	\$505,780	\$154,744	\$10,582	\$180,010	\$645,873	\$170,066	\$13,434	\$431	\$21,844	64
\$8,040	\$1,720	\$35		\$0,338	\$52,850	\$1,150	\$131		\$242	65
\$0,503	\$13,000	\$0,492	\$401	\$10,320	\$26,481	\$8,800	\$784	\$80	\$1,350	66
\$175,484	\$540,684	\$17,817	\$10,121	\$103,314	\$592,753	\$168,810	\$12,510	\$351	\$20,037	67
	\$680			\$0,635	\$3,780		\$278		\$315	68
\$1,804,500	\$3,007,101	\$1,504,300	\$50,881	\$1,028,870	\$8,808,527	\$1,045,541	\$145,140	\$2,313	\$353,368	69
\$707,130	\$1,200,043	\$535,314	\$10,001	\$501,503	\$3,004,788	\$641,070	\$53,026	\$860	\$135,011	70
\$602,727	\$1,148,800	\$507,100	\$10,001	\$400,000	\$3,850,362	\$600,015	\$53,015	\$800	\$135,848	71
\$14,400	\$120,147	\$28,118		\$10,804	\$54,426	\$72,055	\$011		\$03	72
\$34,040	\$45,300	\$22,447	\$817	\$10,416	\$88,100	\$39,330	\$2,830	\$55	\$5,541	73
\$100	\$1,418	\$170		\$330		\$750	\$5			74
\$1,880	\$7,808	\$2,008	\$75	\$1,100	\$10,250	\$3,772	\$440	\$12	\$470	75
\$1,130,678	\$1,755,400	\$1,020,024	\$33,118	\$505,915	\$4,872,220	\$330,743	\$85,770	\$1,880	\$208,240	76
\$11,000	\$18,126	\$13,143	\$210	\$3,543	\$23,070	\$24,870	\$2,457		\$3,200	77

TABLE 15.—CANNING AND PRESERVING, FRUITS AND VEGETABLES—

		United States.	Alabama.	Arkansas.	California.	Connecticut.	Delaware.
78	Products:						
	Aggregate value.....	\$78,142,022	\$8,456	\$180,293	\$23,809,988	\$59,457	\$1,456,185
	Canned vegetables—						
79	Total value.....	\$45,262,148	\$4,146	\$36,998	\$2,306,661	\$51,670	\$1,406,102
	Tomatoes—						
80	Cases.....	9,301,264	1,298	24,992	541,776	19,389	679,080
81	Value.....	\$13,885,169	\$2,427	\$35,331	\$845,805	\$37,147	\$1,007,595
	Corn—						
82	Cases.....	11,209,397	150		7,182	2,035	152,900
83	Value.....	\$15,952,066	\$240		\$12,928	\$4,070	\$207,810
	Peas—						
84	Cases.....	4,694,492			68,142		131,147
85	Value.....	\$7,928,791			\$144,033		\$178,729
	Beans—						
86	Cases.....	2,517,549	300		65,641		
87	Value.....	\$3,972,332	\$360		\$133,494		
	Pumpkins—						
88	Cases.....	244,457	20		18,852	1,800	600
89	Value.....	\$345,337	\$30		\$30,156	\$2,550	\$500
	Sweet potatoes—						
90	Cases.....	192,997	600	1,173	4,681		5,200
91	Value.....	\$284,385	\$900	\$1,667	\$9,826		\$7,695
	Others—						
92	Cases.....	1,213,134	62		274,309	6,545	2,476
93	Value.....	\$2,994,068	\$129		\$1,190,419	\$7,903	\$3,773
	Canned fruits—						
94	Total value.....	\$11,644,042	\$4,210	\$8,262	\$6,978,083	\$7,387	\$36,731
	Peaches—						
95	Cases.....	1,302,876	1,663	3,067	744,715		1,843
96	Value.....	\$3,694,272	\$3,825	\$6,618	\$2,640,524		\$4,211
	Pears—						
97	Cases.....	788,675	10		524,197		10,808
98	Value.....	\$2,192,085	\$30		\$1,577,823		\$19,775
	Apricots—						
99	Cases.....	539,082			532,038		
100	Value.....	\$1,638,719			\$1,619,757		
	Apples—						
101	Cases.....	486,945	167	1,025	31,286	5,242	383
102	Value.....	\$732,128	\$260	\$1,644	\$67,591	\$7,275	\$625
	Cherries—						
103	Cases.....	317,366			171,298		
104	Value.....	\$818,572			\$457,169		
	Plums—						
105	Cases.....	298,313	55		196,379		
106	Value.....	\$495,303	\$75		\$349,307	\$112	
	Raspberries—						
107	Cases.....	177,227			5,282		90
108	Value.....	\$409,452			\$18,919		\$225
	Blackberries—						
109	Cases.....	164,429	10		47,071		3,040
110	Value.....	\$285,482	\$20		\$101,688		\$3,760
	Strawberries—						
111	Cases.....	141,527			15,114		
112	Value.....	\$342,985			\$48,033		
	Other—						
113	Cases.....	386,452			54,215		6,150
114	Value.....	\$835,044			\$97,272		\$8,135
	Dried fruits—						
115	Total pounds.....	243,579,623		3,001,003	300,308,919		
116	Total value.....	\$15,664,784		\$129,094	\$13,800,601		
	Raisins—						
117	Pounds.....	121,409,881			121,409,881		
118	Value.....	\$6,349,381			\$6,349,381		
	Prunes—						
119	Pounds.....	117,808,181			114,580,431		
120	Value.....	\$3,299,628			\$3,169,878		
	Apples—						
121	Pounds.....	40,737,089		3,001,003	811,254		
122	Value.....	\$1,758,610		\$129,094	\$40,659		
	Peaches—						
123	Pounds.....	25,861,074			25,845,364		
124	Value.....	\$1,702,205			\$1,701,105		
	Apricots—						
125	Pounds.....	19,559,573			19,559,573		
126	Value.....	\$1,410,838			\$1,410,838		
	Other—						
127	Pounds.....	18,203,825			18,102,416		
128	Value.....	\$1,144,122			\$1,128,740		
129	All other products.....	\$5,571,048	\$100	\$5,939	\$664,643	\$400	\$13,352
	Power:						
130	Number of establishments reporting.....	1,402	1	14	148	4	47
131	Total horsepower.....	44,879	20	202	3,900	128	1,275
	Owned—						
	Engines—						
	Steam—						
132	Number.....	1,779	1	8	156	4	59
133	Horsepower.....	42,102	20	163	3,218	128	1,252
	Gas or gasoline—						
134	Number.....	149		6	24		1
135	Horsepower.....	1,157		15	105		2
	Water wheels—						
136	Number.....	6					
137	Horsepower.....	98					
	Water motors—						
138	Number.....	5					
139	Horsepower.....	37					
	Electric motors—						
140	Number.....	35			4		1
141	Horsepower.....	380			33		1
142	Other power, horsepower.....	24		24			
	Rented—						
	Electric motors—						
143	Number.....	126			83		
144	Horsepower.....	918			579		
145	Other kind, horsepower.....	163			25		20
146	Furnished to other establishments, horsepower.....	17					

CANNING AND PRESERVING.

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DETAILED SUMMARY, BY STATES AND TERRITORIES: 1905—Continued.

Illinois.	Indiana.	Iowa.	Kansas.	Maine.	Maryland.	Michigan.	Minnesota.	Mississippi.	Missouri.	
\$3,111,866	\$5,080,806	\$2,770,804	\$80,750	\$1,891,790	\$12,466,540	\$1,747,081	\$253,085	\$3,359	\$508,013	78
\$2,046,788	\$4,422,958	\$2,772,340	\$88,075	\$1,714,414	\$0,556,011	\$872,145	\$251,085	\$3,347	\$485,375	79
68,501	1,156,143	60,444	21,505	114	3,638,363	113,670	1,520	2,242	280,280	80
\$100,478	\$1,820,876	\$102,056	\$30,391	\$272	\$4,976,008	\$188,429	\$2,280	\$3,322	\$413,886	81
1,773,085	678,950	1,941,520	39,519	703,295	1,600,802	66,379	185,070		38,440	82
\$2,403,720	\$958,455	\$2,616,178	\$49,423	\$1,525,080	\$2,021,627	\$103,751	\$248,712		\$53,040	83
22,708	425,314	20,754	3,506	4,008	622,263	263,423				84
\$35,300	\$644,439	\$47,615	\$4,143	\$7,348	\$1,019,131	\$471,613				85
243,827	202,501	2,237	1,666	54,805	870,121	31,273	100		13	86
\$321,458	\$401,233	\$2,165	\$1,666	\$92,231	\$1,031,025	\$53,335	\$250		\$17	87
28,714	35,278	907	2,700	2,105	10,592	8,828	248		3,487	88
\$34,080	\$57,417	\$1,131	\$2,800	\$3,341	\$24,283	\$10,076	\$543		\$4,182	89
	1,383		305		109,347				9,667	90
	\$2,330		\$305		\$148,900				\$13,650	91
31,642	319,234	1,580	107	20,883	107,118	23,705	140	11		92
\$50,843	\$448,208	\$2,295	\$157	\$80,133	\$335,541	\$44,941	\$200	\$25		93
\$16,115	\$28,066	\$100	\$225	\$121,173	\$1,765,824	\$501,008	\$900	\$12	\$5,064	94
4,070	6,065				352,244	68,260		5	2,287	95
\$9,600	\$14,016				\$753,003	\$170,838		\$12	\$3,794	96
	400			270	120,213	3,060				97
	\$917			\$486	\$100,802	\$17,680				98
										99
										100
1,482		83	150	3,088	47,117	68,454			1,309	101
\$2,225		\$100	\$225	\$6,794	\$70,980	\$103,410			\$2,086	102
	80				30,104	12,084				103
	\$195				\$47,869	\$44,801				104
	1,525				5,902	37,020				105
	\$1,595				\$9,383	\$51,227				106
					30,442	6,208				107
					\$47,340	\$10,940				108
					58,758	0,077			42	109
					\$51,164	\$20,537			\$54	110
					72,130	8,900			20	111
56	100				\$120,324	\$32,758			\$30	112
\$100										
2,121	4,053			50,012	105,605	13,428	487			113
\$3,181	\$10,144			\$113,893	\$420,970	\$30,880	\$900			114
1,518,145						3,605,221			18,000	115
\$97,443						\$179,080			\$900	116
										117
										118
										119
										120
1,518,145						3,632,781			18,000	121
\$97,443						\$177,343			\$900	122
										123
										124
										125
										126
										127
										128
\$82,520	\$938,872	\$7,804	\$550	\$50,203	\$1,144,114	\$105,053	\$1,010		\$10,674	129
44	05	40	4	72	245	72	15	3	53	130
1,753	4,438	2,348	103	1,154	5,085	2,107	308	60	885	131
54	115	52	6	81	314	80	16	2	54	132
1,701	4,127	2,302	103	1,030	5,561	2,132	307	40	881	133
6	4	1		2	0	10			2	134
26	45	10		8	124	30			4	135
				1						136
				30						137
	1									138
	20									139
1	14					1				140
6	136					11				141
										142
3	8	7		2		1				143
20	110	30		5		1				144
				75						145
						17	1	10		146

TABLE 15.—CANNING AND PRESERVING, FRUITS AND VEGETABLES—

		Nebraska.	New Jersey.	New York.	North Carolina.	Ohio.	Oregon.
1	Number of establishments	8	59	549	18	77	20
2	Capital:						
3	Total	\$356,657	\$1,718,192	\$9,806,857	\$32,607	\$1,768,001	\$207,255
4	Land	\$13,100	\$55,180	\$506,304	\$8,600	\$87,603	\$32,849
5	Buildings	\$82,000	\$38,060	\$2,116,425	\$5,375	\$362,437	\$46,385
6	Machinery, tools, and implements	\$93,500	\$33,947	\$2,367,393	\$7,195	\$470,266	\$40,325
7	Cash and sundries	\$168,057	\$81,005	\$4,816,735	\$11,437	\$847,695	\$87,666
8	Proprietors and firm members	5	69	592	23	97	21
9	Salaried officials, clerks, etc.:						
10	Total number	20	48	428	5	117	12
11	Total salaries	\$11,184	\$35,478	\$444,797	\$885	\$75,327	\$10,585
12	Officers of corporations—						
13	Number	13	13	73	1	31	4
14	Salaries	\$5,590	\$12,850	\$139,488	\$100	\$23,795	\$5,775
15	General superintendents, managers, clerks, etc.—						
16	Total number	7	35	355	4	86	8
17	Total salaries	\$5,594	\$22,628	\$305,309	\$785	\$51,532	\$4,810
18	Men—						
19	Number	7	29	307	4	80	7
20	Salaries	\$5,594	\$20,376	\$282,569	\$785	\$50,712	\$4,290
21	Women—						
22	Number		6	48		6	1
23	Salaries		\$2,252	\$22,740		\$820	\$520
24	Wage-earners, including pieceworkers, and total wages:						
25	Greatest number employed at any one time during the year..	1,631	6,274	25,942	356	8,349	847
26	Least number employed at any one time during the year..	663	2,890	10,589	175	2,111	409
27	Average number	292	1,558	6,618	57	1,577	160
28	Total wages	\$62,085	\$348,156	\$1,903,983	\$6,889	\$400,061	\$41,862
29	Men 16 years and over—						
30	Average number	157	675	3,066	18	864	38
31	Wages	\$38,672	\$202,396	\$1,161,649	\$3,640	\$280,179	\$18,229
32	Women 16 years and over—						
33	Average number	90	847	3,391	28	661	105
34	Wages	\$18,818	\$141,410	\$720,434	\$2,421	\$114,183	\$21,134
35	Children under 16 years—						
36	Average number	45	36	161	11	52	17
37	Wages	\$4,575	\$4,350	\$21,900	\$828	\$5,069	\$2,499
38	Average number of wage-earners, including pieceworkers, employed during each month:						
39	Men 16 years and over—						
40	January	8	200	592	3	48	
41	February	8	221	515	3	42	
42	March	8	304	548	3	59	1
43	April	11	285	675	3	57	3
44	May	17	319	880	5	161	10
45	June	26	515	2,108	10	462	72
46	July	44	432	5,428	45	668	67
47	August	730	1,321	5,224	67	2,895	26
48	September	803	2,040	7,778	62	3,530	160
49	October	149	1,546	6,751	11	1,716	75
50	November	65	575	3,998	2	544	24
51	December	15	342	2,295	2	186	8
52	Women 16 years and over—						
53	January	8	15	577		19	
54	February	8	16	438		17	
55	March	8	20	401		31	
56	April	9	17	479		28	
57	May	9	118	652	4	54	2
58	June	10	307	2,099	20	268	294
59	July	89	162	4,544	92	466	210
60	August	420	2,036	6,541	124	1,799	117
61	September	363	3,893	9,146	82	2,809	353
62	October	85	2,540	7,824	5	1,942	204
63	November	62	825	5,239		416	79
64	December	9	215	2,752		83	1
65	Children under 16 years—						
66	January		4	11			
67	February		4	11			
68	March		4	11			
69	April		4	13			
70	May		4	12	4		
71	June		36	93		32	48
72	July	15	14	305	43	70	43
73	August	218	83	410	44	177	40
74	September	240	140	571	32	212	48
75	October	45	98	346		128	16
76	November	22	31	120		5	9
77	December		10	29			
78	Miscellaneous expenses:						
79	Total	\$26,228	\$155,091	\$953,366	\$3,342	\$163,735	\$23,548
80	Rent of works	\$1	\$1,110	\$10,617	\$40	\$2,210	
81	Taxes, not including internal revenue	\$801	\$6,547	\$26,528	\$215	\$9,311	\$1,252
82	Rent of offices, interest, insurance, and all other sundry expenses not hitherto included.	\$25,426	\$147,434	\$913,986	\$850	\$151,214	\$22,296
83	Contract work			\$2,235	\$2,228		
84	Materials used:						
85	Aggregate cost	\$308,966	\$1,432,209	\$6,807,832	\$24,637	\$1,725,473	\$165,902
86	Principal materials—						
87	Total cost	\$95,259	\$717,877	\$3,600,148	\$11,075	\$755,413	\$97,364
88	Purchased in raw state	\$90,702	\$696,667	\$3,056,954	\$11,075	\$746,410	\$83,305
89	Purchased in partially manufactured form	\$4,557	\$21,210	\$543,194		\$8,994	\$14,059
90	Fuel	\$4,230	\$19,393	\$217,227	\$467	\$17,321	\$4,142
91	Rent of power and heat		\$125	\$725	\$32	\$1,201	
92	Mill supplies	\$318	\$1,936	\$14,082	\$104	\$1,803	\$108
93	All other materials	\$207,350	\$686,959	\$2,939,468	\$12,909	\$942,578	\$63,619
94	Freight	\$1,800	\$5,919	\$36,182	\$50	\$7,157	\$669

¹ Includes establishments distributed as follows: Colorado, 7; Georgia, 4; Idaho, 3; Kentucky, 9; Louisiana, 1; Massachusetts, 5; New Hampshire, 4; New Mexico, 1; Oklahoma, 1; Rhode Island, 1; South Dakota, 1; Washington, 11.

CANNING AND PRESERVING.

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DETAILED SUMMARY, BY STATES AND TERRITORIES: 1905—Continued.

Pennsylvania.	South Carolina.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	West Virginia.	Wisconsin.	All other states. 1	
52	5	15	14	18	4	150	14	40	48	1
\$774,604	\$2,540	\$80,525	\$72,500	\$927,862	\$84,763	\$512,979	\$28,204	\$2,070,510	\$781,930	2
\$22,502	\$205	\$4,125	\$2,755	\$73,228	\$600	\$19,210	\$2,550	\$157,817	\$45,745	3
\$135,610	\$330	\$15,825	\$18,755	\$160,480	\$23,192	\$64,797	\$6,500	\$474,812	\$199,752	4
\$331,340	\$740	\$23,750	\$30,000	\$114,061	\$27,550	\$110,215	\$6,130	\$530,065	\$217,616	5
\$285,212	\$1,265	\$45,825	\$20,480	\$550,093	\$33,121	\$318,757	\$13,024	\$1,507,816	\$318,817	6
55	5	16	7	6	2	239	28	3	31	7
47		12	8	36	7	27	2	149	50	8
\$21,182		\$10,342	\$4,101	\$24,735	\$4,400	\$5,825	\$145	\$134,603	\$40,848	9
15		4	1	14	1	2		40	15	10
\$4,525		\$3,250	\$1,500	\$8,230	\$1,200	\$1,100		\$45,490	\$18,450	11
32		8	7	22	6	25	2	100	35	12
\$10,057		\$7,002	\$2,601	\$16,505	\$3,200	\$4,725	\$145	\$80,113	\$22,398	13
31		8	7	21	5	24	2	99	31	14
\$10,207		\$7,002	\$2,601	\$16,385	\$2,800	\$4,600	\$145	\$85,131	\$21,375	15
1				1	1	1		10	4	16
\$360				\$120	\$400	\$20		\$3,082	\$1,023	17
2,050	73	1,054	546	1,512	340	4,808	302	5,058	3,015	18
1,425	52	343	330	468	33	3,018	267	1,505	1,150	19
469	10	263	89	309	52	820	71	783	783	20
\$128,309	\$1,044	\$30,480	\$11,526	\$90,300	\$15,108	\$130,531	\$7,541	\$391,631	\$212,500	21
177	3	67	20	142	26	230	16	730	311	22
\$74,522	\$500	\$18,197	\$4,021	\$48,730	\$10,874	\$50,704	\$2,000	\$307,038	\$118,400	23
225	0	112	44	171	23	404	55	384	406	24
\$47,280	\$481	\$10,526	\$4,710	\$39,804	\$3,884	\$68,075	\$4,575	\$74,850	\$80,273	25
07	1	24	25	56	3	06		73	60	26
\$6,588	\$63	\$1,706	\$1,886	\$10,847	\$350	\$8,002		\$9,743	\$7,800	27
31		0		14		1		86	43	28
20		9		13	5	1		91	47	29
33		0		32	5	1		109	100	30
39		10		34	6	2		227	132	31
41		30		42	5	50		300	113	32
81	7	60	57	72	11	95		671	275	33
222	12	99	80	179	34	172		2,480	534	34
500	13	222	82	271	28	980	55	2,280	650	35
584	4	211	12	480	180	1,020	71	1,886	720	36
348		90		436	29	479	60	715	706	37
103		31		79	9	43		358	331	38
53		18		43		0		165	72	39
8				2		1		27	25	40
0				4	2	2		10	23	41
17				13	2	2		23	37	42
22				17	1	2		25	37	43
17		15		23	2	20		21	69	44
93	8	35	145	48	12	85		274	205	45
362	20	100	190	150	42	239		1,007	440	46
767	24	482	170	350	41	2,150	173	1,155	1,070	47
822	14	450	8	740	119	2,259	260	1,147	1,400	48
420		180		612	41	1,081	227	630	1,170	49
111		50		66	14	80		275	298	50
55		20		15		1		96	47	51
									1	52
				10					0	53
				10					0	54
		10		8				5	0	55
20	1	22	06	16		5		97	50	56
150	2	36	01	61		71		199	124	57
220	7	77	97	171		401		258	212	58
225	2	77		227	36	465		209	208	59
138		41	16	161		210		85	150	60
33		20		3				23	20	61
12				5					20	62
										63
\$32,443	\$233	\$7,012	\$5,330	\$41,207	\$14,759	\$23,000	\$1,462	\$248,042	\$54,470	64
\$1,441	\$5	\$1,242	\$15	\$55	\$240	\$2,284	\$1	\$800	\$1,345	65
\$1,233	\$8	\$830	\$426	\$2,036	\$300	\$1,800	\$113	\$12,452	\$3,367	66
\$20,720	\$220	\$5,840	\$4,880	\$38,276	\$14,213	\$10,487	\$1,348	\$235,300	\$49,704	67
\$40						\$80		\$300		68
\$540,805	\$3,480	\$150,060	\$40,601	\$500,170	\$50,703	\$647,805	\$40,381	\$1,700,707	\$724,040	69
\$242,873	\$1,400	\$71,835	\$22,006	\$185,131	\$27,030	\$240,182	\$18,204	\$727,091	\$358,603	70
\$240,441	\$1,400	\$50,335	\$22,508	\$183,300	\$27,030	\$238,672	\$18,204	\$720,771	\$310,000	71
\$2,432		\$21,500	\$400	\$1,825		\$1,510		\$6,920	\$38,703	72
\$7,174	\$150	\$1,012	\$1,000	\$8,411	\$1,404	\$8,175	\$024	\$26,110	\$10,085	73
						\$25				74
\$730	\$6	\$200	\$80	\$688	\$353	\$534		\$3,451	\$1,572	75
\$283,646	\$1,803	\$74,510	\$22,065	\$302,480	\$30,880	\$304,593	\$30,593	\$913,332	\$330,045	76
\$6,433	\$70	\$2,100	\$800	\$9,467		\$4,386		\$30,213	\$18,035	77

TABLE 15.—CANNING AND PRESERVING, FRUITS AND VEGETABLES—

		Nebraska.	New Jersey.	New York.	North Carolina.	Ohio.	Oregon.
78	Products:						
	Aggregate value	\$559,489	\$2,204,365	\$11,589,397	\$44,741	\$2,840,359	\$282,328
79	Canned vegetables—						
	Total value	\$541,710	\$1,923,883	\$6,836,451	\$25,168	\$2,718,931	\$30,045
80	Tomatoes—						
81	Cases	3,210	790,724	184,894	10,430	350,892	4,300
	Value	\$4,930	\$1,273,426	\$389,036	\$17,995	\$535,751	\$5,565
82	Corn—						
83	Cases	394,826	100	1,444,344	1,191	1,280,006	.....
	Value	\$533,400	\$300	\$2,272,682	\$1,864	\$1,736,503	.....
84	Peas—						
85	Cases .....	.....	118,200	1,509,629	.....	64,503	1,408
	Value .....	.....	\$245,270	\$2,598,291	.....	\$141,805	\$2,816
86	Beans—						
87	Cases	1,000	152,655	551,081	4,850	143,600	4,009
	Value	\$1,200	\$272,755	\$1,055,253	\$5,309	\$241,125	\$10,892
88	Pumpkins—						
89	Cases	1,533	13,682	45,063	.....	33,656	2,590
	Value	\$1,900	\$14,787	\$72,780	.....	\$44,546	\$8,095
90	Sweet potatoes—						
91	Cases .....	.....	21,547	329	.....	.....	.....
	Value .....	.....	\$40,952	\$329	.....	.....	.....
92	Others—						
93	Cases	213	28,868	186,728	.....	8,322	908
	Value	\$280	\$76,393	\$448,080	.....	\$19,201	\$1,677
94	Canned fruits—						
	Total value	\$14,779	\$194,543	\$1,207,760	\$18,993	\$49,904	\$214,363
95	Peaches—						
96	Cases	7,427	9,767	10,060	4,228	12,762	1,670
	Value	\$11,415	\$19,370	\$39,399	\$8,500	\$35,134	\$5,312
97	Pears—						
98	Cases .....	.....	34,094	51,309	.....	.....	14,174
	Value .....	.....	\$97,202	\$172,944	.....	.....	\$43,464
99	Apricots—						
100	Cases .....	.....	.....	435	.....	.....	.....
	Value .....	.....	.....	\$1,630	.....	.....	.....
101	Apples—						
102	Cases	2,526	.....	259,296	359	3,427	15,943
	Value	\$3,364	.....	\$354,817	\$617	\$5,145	\$35,170
103	Cherries—						
104	Cases .....	.....	2,974	46,160	.....	252	27,346
	Value .....	.....	\$8,061	\$133,814	.....	\$1,160	\$72,465
105	Plums—						
106	Cases .....	.....	.....	41,195	.....	2,831	1,637
	Value .....	.....	.....	\$58,839	.....	\$3,438	\$3,045
107	Raspberries—						
108	Cases .....	.....	1,476	125,303	.....	79	4,342
	Value .....	.....	\$4,202	\$292,240	.....	\$384	\$15,549
109	Blackberries—						
110	Cases .....	.....	2,435	6,690	7,602	600	4,094
	Value .....	.....	\$5,020	\$19,308	\$9,636	\$2,000	\$8,635
111	Strawberries—						
112	Cases .....	.....	12,669	18,737	125	359	9,757
	Value .....	.....	\$30,950	\$60,623	\$240	\$903	\$30,324
113	Other—						
114	Cases .....	.....	12,974	26,079	.....	1,726	123
	Value .....	.....	\$29,138	\$74,146	.....	\$1,800	\$399
115	Dried fruits—						
116	Total pounds .....	.....	.....	31,543,381	.....	3,750	863,000
	Total value .....	.....	.....	\$1,346,040	.....	\$300	\$31,000
117	Raisins—						
118	Pounds .....	.....	.....	.....	.....	.....	.....
119	Prunes—						
120	Pounds .....	.....	.....	.....	.....	.....	813,000
	Value .....	.....	.....	.....	.....	.....	\$28,000
121	Apples—						
122	Pounds .....	.....	.....	31,458,702	.....	3,750	50,000
	Value .....	.....	.....	\$1,331,815	.....	\$300	\$3,000
123	Peaches—						
124	Pounds .....	.....	.....	15,710	.....	.....	.....
	Value .....	.....	.....	\$1,100	.....	.....	.....
125	Apricots—						
126	Pounds .....	.....	.....	.....	.....	.....	.....
	Value .....	.....	.....	.....	.....	.....	.....
127	Other—						
128	Pounds .....	.....	.....	68,969	.....	.....	.....
	Value .....	.....	.....	\$13,045	.....	.....	.....
129	All other products	\$3,000	\$85,939	\$2,199,146	\$580	\$71,164	\$6,920
130	Power:						
131	Number of establishments reporting	8	54	176	4	73	8
	Total horsepower	378	1,801	8,346	48	2,669	212
132	Owned—						
	Engines—						
133	Steam—						
	Number	13	93	310	3	78	9
	Horsepower	370	1,737	7,837	43	2,321	206
134	Gas or gasoline—						
135	Number	2	8	53	.....	6	.....
	Horsepower	8	44	295	.....	148	.....
136	Water wheels—						
137	Number .....	.....	1	3	.....	.....	1
	Horsepower .....	.....	3	64	.....	.....	1
138	Water motors—						
139	Number .....	.....	.....	2	.....	2	.....
	Horsepower .....	.....	.....	7	.....	10	.....
140	Electric motors—						
141	Number .....	.....	2	4	.....	5	.....
	Horsepower .....	.....	7	41	.....	130	.....
142	Other power, horsepower .....	.....	.....	.....	.....	.....	.....
143	Rented—						
	Electric motors—						
144	Number .....	.....	.....	19	.....	2	1
	Horsepower .....	.....	.....	102	.....	60	5
145	Other kind, horsepower .....	.....	10	.....	5	.....	.....
146	Furnished to other establishments, horsepower

CANNING AND PRESERVING.

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DETAILED SUMMARY, BY STATES AND TERRITORIES: 1905—Continued.

Pennsylvania.	South Carolina.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	West Virginia.	Wisconsin.	All other states.	
\$841,168	\$6,240	\$240,206	\$84,033	\$801,058	\$112,711	\$010,850	\$75,357	\$2,847,127	\$1,245,422	78
\$788,321	\$4,284	\$165,157	\$19,705	\$659,509	\$111,111	\$879,905	\$57,602	\$2,732,907	\$780,824	79
96,790	1,677	89,821	8,962	312,430		503,145	39,007	6,699	222,900	80
\$102,071	\$2,934	\$132,300	\$15,205	\$506,578		\$747,838	\$55,495	\$11,490	\$304,075	81
351,045		6,765	31		42,830	17,414	188	388,000	32,721	82
\$453,170		\$10,350	\$53		\$96,468	\$23,707	\$200	\$571,105	\$46,441	83
30,799				41,634		12,500		1,226,538	110,016	84
\$64,350				\$80,155		\$24,500		\$2,011,226	\$208,018	85
70,763	213	10,451		5,303	5,445	17,360	1,008	33,350	34,393	86
\$91,410	\$260	\$11,394		\$8,220	\$10,040	\$27,441	\$1,967	\$55,908	\$51,868	87
5,647		413		1,160				4,009	13,393	88
\$6,500		\$548		\$2,276				\$5,657	\$18,103	89
225		6,267	2,535			29,738				90
\$319		\$19,475	\$1,356			\$42,015				91
4,104	431			635	1,211	8,053		47,250	38,909	92
\$10,489	\$1,000			\$2,280	\$4,003	\$13,714		\$77,425	\$68,209	93
\$41,576	\$1,706	\$21,326	\$63,242	\$91,086		\$22,305	\$17,005		\$210,774	94
450	487		30,086	17,845		3,551	5,730		14,576	95
\$1,400	\$1,210		\$52,089	\$43,898		\$9,804	\$10,055		\$30,452	96
4,020	57			8,300		440			10,306	97
\$7,750	\$180			\$21,079		\$718			\$32,223	98
				3,362					3,247	99
				\$8,200					\$9,132	100
17,150	143	750	200	2,346		402	200		24,348	101
\$23,403	\$225	\$1,140	\$402	\$4,087		\$985	\$240		\$38,940	102
885				2,749		5,375			17,450	103
\$3,259				\$9,370		\$9,455			\$30,354	104
1,070				3,428		11	1,200		6,001	105
\$1,873				\$4,329		\$13	\$1,400		\$10,067	106
904				811					2,200	107
\$1,300				\$2,217					\$7,025	108
40	100	4,200	6,104	201		5,355			8,305	109
\$84	\$175	\$4,980	\$8,141	\$407		\$6,070			\$13,137	110
900									2,600	111
\$1,200									\$8,200	112
508		9,550	380	287		750			6,354	113
\$1,130		\$15,200	\$1,710	\$400		\$900			\$18,035	114
218,454				6,250					2,433,500	115
\$9,576				\$400					\$102,750	116
										117
										118
				6,250					2,408,500	119
				\$400					\$101,350	120
218,454									25,000	121
\$9,576									\$1,400	122
										123
										124
										125
										126
										127
\$4,005	\$100	\$53,813	\$1,086	\$50,393	\$1,000	\$8,040		\$114,100	\$146,074	128
40	1	13	9	18	4	61	2	30	29	130
880	12	300	140	500	70	955	30	2,830	1,028	181
										132
92	1	15	9	18	5	60	2	57	30	133
870	12	300	140	500	70	943	30	2,594	1,014	134
1								7	5	135
5						12		256	14	136
										137
										138
										139
1								2		140
5								10		141
										142
										143
										144
										145
										146

CANNING AND PRESERVING, FISH.

Table 16 is a comparative summary of the statistics of establishments engaged in canning and preserving fish as returned at the censuses of 1890, 1900, and 1905, with the percentage of increase for each census period.

TABLE 16.—*Canning and preserving, fish—comparative summary, with per cent of increase: 1890 to 1905.*

	CENSUS.			PER CENT OF INCREASE.	
	1905 ¹	1900	1890	1900 to 1905	1890 to 1900
Number of establishments.....	373	346	110	7.8	214.5
Capital.....	\$19,853,016	\$19,454,222	\$3,186,975	2.0	510.4
Salaried officials, clerks, etc., number.....	785	611	2182	28.5	235.7
Salaries.....	\$873,493	\$580,220	\$120,253	50.5	382.5
Wage-earners, average number.....	6,959	13,355	5,020	47.9	166.1
Total wages.....	\$3,241,740	\$4,207,414	\$1,128,143	23.0	273.0
Men 16 years and over.....	5,262	9,476	3,787	45.6	155.5
Wages.....	\$2,738,157	\$3,711,282	\$986,689	26.2	276.1
Women 16 years and over.....	1,367	2,533	841	46.0	201.2
Wages.....	\$445,228	\$360,781	\$121,059	20.4	205.5
Children under 16 years	330	1,146	392	71.2	192.3
Wages.....	\$58,355	\$128,351	\$20,395	53.8	519.5
Miscellaneous expenses.....	\$3,082,771	\$880,687	\$280,660	250.0	213.8
Cost of materials used.....	\$15,885,354	\$13,180,451	\$4,710,709	20.7	179.4
Value of products.....	\$20,377,210	\$21,999,249	\$6,972,268	19.9	215.5
Fish.....	\$25,424,390	\$20,117,517	(²)	26.4	.....
Other products.....	\$852,820	\$1,881,732	(³)	49.4	.....

¹ Exclusive of the statistics of 8 establishments, engaged primarily in the manufacture of other products. These establishments packed fish to the value of \$274,403.

² Includes proprietors and firm members, with their salaries; number only reported in 1900 and 1905, but not included in this table.

³ Decrease.

⁴ Includes amounts reported as wages at previous censuses.

⁵ Not reported separately in 1890.

While the canning and preserving of fish had become of considerable importance before 1890, no accurate statistics of the industry appear prior to the census of that year. At the census of 1850 the fishing industry was classed as manufacturing, and at that time products valued at \$10,056,163 were reported for 1,407 establishments. In 1860 fisheries were again reported, at which time were shown 1,970 establishments with products valued at \$14,284,405. While the statistics of canning and preserving fish were probably included in the above figures there was no separate classification for this branch of the work. In 1870, under the head "fish, cured and packed," 75 establishments with products amounting to \$1,592,591 were reported. In 1880 there was no classification covering the canning and preserving of fish, the

reports for such establishments, if taken, being included under other classifications.

In 1890 the Census Office made the first separation of the three branches of the canning and preserving industry. At that time 110 establishments were reported as engaged in canning and preserving fish. The amount of capital invested was \$3,186,975, and the value of products \$6,972,268, for the production of which 5,020 wage-earners were employed, receiving in wages the sum of \$1,128,143. In 1900 the number of establishments had increased to 346, a gain of 214.5 per cent; the capital to \$19,454,222, a gain of 510.4 per cent; the average number of wage-earners to 13,355, a gain of 166.1 per cent; and the wages paid to \$4,207,414, a gain of 273 per cent. The value of products reached the sum of \$21,999,249, or 215.5 per cent more than in 1890.

From 1900 to 1905 the number of establishments increased from 346 to 373, or 7.8 per cent; capital, from \$19,454,222 to \$19,853,016, or 2 per cent; and value of products, from \$21,999,249 to \$26,377,210, a gain of 19.9 per cent. The average number of wage-earners decreased from 13,355 in 1900 to 6,959 in 1905, or 47.9 per cent, while the amount paid for wages dropped from \$4,207,414 to \$3,241,740, or 23 per cent. This decrease is due, as before indicated, to the difference in the methods employed at the two censuses of reporting contract labor. A large part of the work at fish canning establishments, particularly the salmon canneries, is under the contract system. The canner contracts with parties to furnish labor for packing the fish at an agreed sum per case, usually guaranteeing that a certain number of cases shall be packed during the season. In 1890 the returns for many of these establishments reported such employees as wage-earners, and the amount paid under such contract as the wages paid; while in 1905 this item was in all cases included under contract work which appears in the statistics under the head of miscellaneous expenses, which item shows an increase in 1905 over 1900 of \$2,202,084, or 250 per cent.

Table 17 presents, by states and territories, a comparative summary of the statistics for the canning and preserving of fish as returned at the censuses of 1900 and 1905.

TABLE 17.—CANNING AND PRESERVING, FISH—COMPARATIVE SUMMARY, BY STATES AND TERRITORIES: 1905 AND 1900.

STATE OR TERRITORY.	Census.	Number of establishments.	Capital.	WAGE-EARNERS AND WAGES.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Average number.	Wages.			
United States.....	1905	373	\$10,853,016	6,959	\$3,241,740	\$3,082,771	\$15,885,354	\$26,377,210
	1900	346	19,454,222	13,355	4,207,414	880,687	13,160,451	21,000,240
Alaska.....	1905	63	10,275,736	1,805	950,081	1,820,590	3,546,208	7,735,782
	1900	36	3,203,228	2,092	1,242,642	150,854	1,587,883	3,821,136
California.....	1905	13	464,330	105	81,516	25,907	483,447	788,438
	1900	10	691,285	376	158,888	23,370	449,718	800,432
Delaware ¹	1900	3	1,035			80	0,238	8,473
Illinois.....	1905	4	13,390	4	2,118	735	13,210	22,060
	1900	4	2,655	5	2,642	526	3,195	8,900
Louisiana.....	1905	3	331,071	147	48,623	74,407	157,306	410,250
	1900	6	186,489	236	44,710	6,408	67,583	144,379
Maine.....	1905	141	2,144,690	2,562	1,047,601	230,619	2,082,025	5,055,091
	1900	117	8,481,056	5,567	1,184,850	97,859	2,578,636	4,779,733
Maryland ¹	1900	3	65,600	442	63,500	11,020	154,005	248,100
Massachusetts.....	1905	50	1,076,171	1,031	438,482	191,703	3,431,055	4,508,444
	1900	61	1,734,227	1,328	475,123	118,058	3,471,112	4,619,362
Michigan.....	1905	4	18,350	16	7,540	1,014	78,413	94,150
	1900	4	6,800	10	7,961	1,318	52,949	65,077
Mississippi ²	1900	4	122,580	231	41,028	17,997	100,441	337,930
New York.....	1905	15	508,553	160	92,196	77,543	923,015	1,300,425
	1900	9	100,564	66	20,842	11,741	134,211	107,809
Oregon.....	1905	25	1,653,067	351	200,481	183,981	1,700,208	2,577,746
	1900	24	2,558,642	636	210,744	147,858	1,182,218	1,788,809
Virginia.....	1905	4	37,800	58	15,431	5,997	41,354	62,043
	1900	5	10,325	18	4,545	406	13,239	24,700
Washington.....	1905	36	2,030,327	543	314,730	430,474	2,125,825	3,187,149
	1900	36	2,222,726	2,190	711,214	285,353	3,086,865	4,831,038
Wisconsin.....	1905	7	112,001	30	13,076	11,458	218,716	250,324
	1900	6	4,500	3	1,010	1,005	28,142	35,792
All other states.....	1905	8	100,600	57	20,766	13,343	182,682	256,200
	1900	9	61,320	140	28,715	6,735	153,416	221,510

¹ Included in "all other states" in 1905.² None reported in 1905.³ Includes establishments distributed as follows: Delaware, 1; Florida, 1; Maryland, 2; Minnesota, 1; New Jersey, 2; Pennsylvania, 1.⁴ Includes establishments distributed as follows: Missouri, 1; New Hampshire, 1; New Jersey, 1; North Carolina, 1; Ohio, 2; Pennsylvania, 1; South Carolina, 1; Texas, 1.

Alaska produced the largest amount of canned fish during 1905, and made the greatest absolute increase in value of products. This item increased from \$3,821,136 in 1900 to \$7,735,782 in 1905, a gain of \$3,914,646, or 102.4 per cent. The number of establishments increased from 36 to 63, or 75 per cent, and the capital invested from \$3,203,228 to \$10,275,736, a gain of 220.8 per cent. Next in importance to Alaska in 1905 was the state of Maine, which reported products to the value of \$5,055,091, a gain over 1900 of \$275,358, or 5.8 per cent. The number of establishments in this state increased from 117 to 141, an increase of 20.5 per cent, but the total capital dropped from \$8,481,056 to \$2,144,690, a decrease of \$6,336,366, or 74.7 per cent. Two facts help to account for this decrease. The Seacoast Packing Company, one of the largest sardine packers in the state in 1900, went out of existence in 1902, and a number of their plants were not in operation during the last census year. While all the items of capital were less in 1905 than in 1900,

the greater part of the decrease was in "cash and sundries," under which is reported bills receivable, materials, products, and cash on hand, and other sundries. This division of capital shows a decrease of \$4,498,094, indicating the probability of a larger amount of stock on hand at the end of the business year in 1900 than in 1905; for, although the amount of sardines packed in the season of 1904 was the largest that had ever been known in the business, the condition of the market was such that the close of the year found the companies comparatively clear of goods.

The other leading states in the production of canned fish were, in the order named, Massachusetts, Washington, and Oregon. For Massachusetts products valued at \$4,598,444 were reported in 1905, a decrease from 1900 of \$20,918, or one-half of 1 per cent. The number of establishments decreased from 61 to 50, while the capital increased from \$1,734,227 to \$1,976,171. For Washington the value of products was \$3,187,149 in 1905, as compared with \$4,831,038

in 1900, a decrease of 34 per cent. The number of establishments reported at both censuses was 36, but the capital shows a decrease from \$2,222,726 in 1900 to \$2,036,327 in 1905. For Oregon products valued at \$2,577,746 were reported, an increase over 1900 of 44.1 per cent. As previously stated, there was a decrease in number of wage-earners and amount of wages paid in the fish canning industry in the leading states, due

to differences in methods of classifying the data at the two censuses.

In Table 18 the rank of the states and territories where fish canning establishments are located is shown according to number of establishments, capital, wage-earners, wages, and value of products. The statistics from which this table is constructed are contained in Tables 17 and 23.

TABLE 18.—CANNING AND PRESERVING, FISH—RANK OF STATES AND TERRITORIES, BY NUMBER OF ESTABLISHMENTS, CAPITAL, WAGE-EARNERS, WAGES, AND VALUE OF PRODUCTS: 1905 AND 1900.

STATE OR TERRITORY.	RANK ACCORDING TO—									
	Number of es- tablishments.		Capital.		Wage-earners and wages.				Value of products.	
					Average number.		Wages.			
	1905	1900	1905	1900	1905	1900	1905	1900	1905	1900
Alaska.....	2	3	1	2	2	3	2	1	1	4
Maine.....	1	1	2	1	1	1	1	2	2	2
Massachusetts.....	3	2	4	5	3	4	3	4	3	3
Washington.....	4	3	3	4	4	2	4	3	4	1
Oregon.....	5	5	5	3	5	5	5	5	5	4
New York.....	6	7	6	9	7	11	6	10	6	9
California.....	7	6	7	6	6	7	7	6	7	6
Louisiana.....	11	8	8	7	8	8	8	8	8	11
Wisconsin.....	8	8	9	17	10	19	11	19	9	13
Pennsylvania.....	14	17	11	23	11	(1)	9	(1)	10	23
Michigan.....	9	11	13	16	12	13	12	12	11	12
Virginia.....	9	10	12	12	9	14	10	14	12	16
New Jersey.....	12	17	10	15	13	17	13	15	13	14
Illinois.....	9	11	15	19	15	18	14	16	14	18
Minnesota.....	14	(1)	14	(1)	16	(1)	16	(1)	15	(1)
Maryland.....	12	14	16	10	14	6	15	7	16	8
Delaware.....	14	14	17	20	17	(1)	17	(1)	17	19
Florida.....	14	(1)	18	(1)	(1)	(1)	(1)	(1)	18	(1)
Mississippi.....	(1)	11	(1)	8	(1)	9	(1)	9	(1)	7
Missouri.....	(1)	17	(1)	11	(1)	16	(1)	13	(1)	10
North Carolina.....	(1)	17	(1)	13	(1)	10	(1)	11	(1)	14
Texas.....	(1)	17	(1)	14	(1)	15	(1)	17	(1)	17
South Carolina.....	(1)	17	(1)	18	(1)	12	(1)	18	(1)	20
New Hampshire.....	(1)	17	(1)	22	(1)	20	(1)	20	(1)	21
Ohio.....	(1)	16	(1)	21	(1)	(1)	(1)	(1)	(1)	22

¹ None reported.

Alaska advanced from fourth rank in 1900 to first in 1905 in the value of products reported, passing Washington, Maine, and Massachusetts. Maine, Massachusetts, and Oregon ranked second, third, and fifth, respectively, at both censuses. Washington dropped from first rank in 1900 to fourth in 1905.

Alaska advanced from third to second rank in number of establishments and number of wage-earners employed, and from second to first in capital invested, but dropped from first to second in amount of wages paid. In number of establishments and average number of wage-earners Maine was first at both censuses, but dropped from first to second place in capital and advanced from second to first in amount of wages paid. Massachusetts advanced from fourth to third place in wage-earners and wages, from fifth to fourth in capital, and dropped from second to third in number of establishments. In 1905 Washington was fourth in all these items except capital, in which it was third. Oregon

was fifth in all items in 1905, and New York sixth in all except average number of wage-earners, in which it ranked seventh.

In Tables 19, 20, 21, and 22 the statistics for canned salmon, canned sardines, canned shrimp, and salted cod are shown, by states and territories, in the order of production. Similar information can be obtained for each class of fish shown by referring to Table 23.

TABLE 19.—Quantity and value of canned salmon, by states and territories: 1905.

(Canning season of 1904.)

STATE OR TERRITORY.	Pounds.	Value.
United States.....	169,771,537	\$11,843,521
Alaska.....	122,012,981	7,618,579
Washington.....	26,601,429	2,431,605
Oregon.....	20,187,559	1,694,762
California.....	969,568	98,575

As shown by Table 19, Alaska produced more canned salmon than all the other states and territories combined. Of the 169,771,537 pounds reported for the United States, Alaska produced 122,012,981 pounds, or 71.9 per cent, and of the total value of products of \$11,843,521 Alaska produced \$7,618,579, or 64.3 per cent. Washington ranked second, with 26,601,429 pounds, valued at \$2,431,605, and Oregon third, with 20,187,559 pounds, valued at \$1,694,762. California was the only other state for which production of canned salmon was reported, there being 969,568 pounds, valued at \$98,575.

TABLE 20.—Quantity and value of canned sardines, by states: 1905.

(Canning season of 1904.)

STATE.	Pounds.	Value.
United States.....	87,224,524	\$4,380,498
Maine.....	86,218,610	4,291,324
California.....	860,000	78,000
New York.....	145,914	11,174

Practically all of the sardines canned in the United States during the census year were packed in the state of Maine. Of the total of 87,224,524 pounds for the United States, 86,218,610 pounds, or 98.8 per cent, were reported for Maine, the value being \$4,291,324 out of a total of \$4,380,498 for the country. The only other states for which sardine canning was reported were California and New York, the former state reporting 860,000 pounds, valued at \$78,000, and the latter 145,914 pounds, valued at \$11,174.

TABLE 21.—Quantity and value of canned shrimp, by states: 1905.

(Canning season of 1904.)

STATE.	Pounds.	Value.
United States.....	5,087,305	\$478,931
Louisiana.....	3,701,655	345,708
Mississippi.....	1,314,775	132,015
All other states.....	10,005	1,208

While there were but three establishments in the country the principal product of which was canned

shrimp, there were nine others for which shrimp was reported as a minor product. The pounds and value of such minor products are included in Table 21. It appears from the table that Louisiana and Mississippi are practically the only states in which canned shrimp is produced. The production in Louisiana was the largest, and amounted to 3,701,655 pounds, with a value of \$345,708. For Mississippi 1,314,775 pounds, valued at \$132,015, were reported. The amount canned in all the other states was but 10,965 pounds, valued at \$1,208.

TABLE 22.—Quantity and value of salted cod, by states: 1905.

(Season of 1904.)

STATE.	Pounds.	Value.
United States.....	48,757,819	\$3,013,320
Massachusetts.....	37,913,154	2,511,159
Maine.....	2,682,355	141,345
Washington.....	876,850	49,366
All other states.....	7,285,460	311,460

In pounds and value of salted cod Massachusetts was first, more than three times the combined output of the other states being produced there. The total for the United States was 48,757,819 pounds, valued at \$3,013,320; for Massachusetts 37,913,154 pounds, with a value of \$2,511,159, were reported, or 77.8 per cent of the total quantity, and 83.3 per cent of the total value for the country. For Maine 2,682,355 pounds, valued at \$141,345, were reported; and for Washington 876,850 pounds, having a value of \$49,366. For the other states only 49,460 pounds, with a value of \$4,090, were reported.

Table 23 shows the detailed statistics, by states and territories, for the industry of fish canning and preserving as returned at the census of 1905. As in the case of fruits and vegetables in Table 15, it has been found necessary to include in the group of "all other states" some states reporting three or more establishments to avoid disclosing operations of individual establishments.

TABLE 23.—CANNING AND PRESERVING, FISH—DETAILED SUMMARY, BY STATES AND TERRITORIES: 1905.

	United States.	Alaska.	Illinois.	Louisiana.	Maine.	Massachusetts.	Michigan.	New York.	Oregon.	Washington.	Wisconsin.	All other states. ¹
Number of establishments.....	373	53	4	3	141	50	4	15	25	36	7	25
Capital:												
Total.....	\$19,853,016	\$10,275,736	\$13,390	\$331,971	\$2,144,600	\$1,976,171	\$18,359	\$598,553	\$1,653,097	\$2,036,327	\$112,001	\$692,730
Land.....	\$2,088,369	\$1,151,282	\$5,590	\$16,590	\$105,685	\$167,515	\$1,250	\$82,200	\$340,387	\$150,550	\$600	\$66,900
Buildings.....	\$3,472,541	\$1,696,955	\$6,900	\$37,500	\$494,275	\$248,450	\$10,500	\$77,878	\$376,286	\$329,148	\$17,900	\$176,749
Machinery, tools, and imple-												
ments.....	\$4,507,028	\$2,640,001	\$650	\$76,987	\$454,555	\$223,143	\$1,300	\$53,357	\$413,948	\$605,184	\$8,095	\$109,808
Cash and sundries.....	\$9,605,078	\$4,787,498	\$340	\$220,984	\$1,060,175	\$1,337,063	\$5,300	\$385,118	\$522,476	\$951,445	\$85,406	\$339,273
Proprietors and firm members.....	341	13	4	5	149	78	6	24	13	13	7	29
Salaried officials, clerks, etc.:												
Total number.....	785	175	44	147	155	1	32	85	87	10	49	
Total salaries.....	\$873,483	\$291,951	\$27,358	\$148,499	\$128,582	\$300	\$31,502	\$85,492	\$94,036	\$5,522	\$60,241	
Officers of corporations—												
Number.....	95	33	3	26	2	2	2	12	12	1	4	
Salaries.....	\$226,766	\$54,590	\$5,590	\$42,836	\$8,500		\$6,820	\$28,140	\$20,500	\$470	\$19,500	
General superintendents, man-												
agers, clerks, etc.—												
Total number.....	600	142	41	121	153	1	30	73	75	9	45	
Total salaries.....	\$646,717	\$197,451	\$21,558	\$105,663	\$120,082	\$300	\$24,682	\$57,352	\$73,536	\$5,052	\$40,741	
Men—												
Number.....	616	136	37	102	130	25	71	73	73	6	36	
Salaries.....	\$616,052	\$193,136	\$20,691	\$98,893	\$112,623	\$22,586	\$56,272	\$72,316	\$3,778	\$36,441		
Women—												
Number.....	74	6	4	19	23	1	5	2	2	3	9	
Salaries.....	\$30,665	\$4,315	\$1,167	\$6,860	\$8,053	\$300	\$2,096	\$1,080	\$1,220	\$1,274	\$4,300	
Wage-earners, including pieceworkers,												
and total wages:												
Greatest number employed at any												
one time during the year.....	16,881	3,936	4	496	7,310	1,595	22	176	1,091	1,185	46	1,020
Least number employed at any one												
time during the year.....	9,888	3,651	4	87	3,410	708	13	151	621	796	24	423
Average number.....	6,953	1,835	4	147	2,562	1,031	16	160	351	543	30	310
Total wages.....	\$3,241,740	\$950,081	\$2,118	\$48,623	\$1,047,601	\$438,482	\$7,540	\$92,196	\$200,481	\$314,739	\$13,076	\$126,713
Men 16 years and over—												
Average number.....	5,262	1,766	4	44	1,386	837	16	131	320	507	30	221
Wages.....	\$2,738,157	\$942,312	\$2,118	\$21,273	\$673,620	\$395,651	\$7,549	\$84,324	\$190,447	\$303,052	\$13,076	\$104,744
Women 16 years and over—												
Average number.....	1,367	27	80	911	193	29	29	28	31	31	68	
Wages.....	\$445,228	\$6,448	\$21,540	\$326,448	\$42,701	\$7,872	\$9,514	\$10,759			\$19,546	
Children under 16 years—												
Average number.....	330	12	23	265	1	3	3	5	5	5	21	
Wages.....	\$58,355	\$1,221	\$5,610	\$47,623	\$130			\$520	\$928		\$2,423	
Average number of wage-earners, in-												
cluding pieceworkers, employed dur-												
ing each month:												
Men 16 years and over—												
January.....	1,769	27	4	6	203	862	21	131	61	257	34	153
February.....	1,707	27	4	6	177	855	21	131	60	231	31	164
March.....	1,883	135	4	55	203	790	21	130	66	227	27	225
April.....	5,194	2,658	4	65	714	638	12	131	310	388	22	252
May.....	6,980	3,605	4	60	1,315	604	12	128	378	543	21	250
June.....	7,456	3,734	4	10	1,612	707	8	127	426	556	29	213
July.....	7,867	3,600	4	55	1,645	753	9	127	584	751	26	246
August.....	8,853	3,658	4	37	2,367	775	9	123	710	785	26	313
September.....	8,471	2,785	4	87	2,988	922	13	127	545	738	30	232
October.....	6,184	601	4	48	2,923	1,058	22	137	421	699	35	210
November.....	4,655	285	4	28	2,169	1,050	22	139	215	505	39	199
December.....	2,145	17	4	5	310	973	22	141	64	374	40	195
Women 16 years and over—												
January.....	313			1	94	184		28				26
February.....	341			1	97	184		28				31
March.....	446			93	115	180		28				30
April.....	826			105	481	155		28	12			45
May.....	1,297	1		97	820	160		28	44	8		40
June.....	1,385	21		20	1,012	195		28	46	22		41
July.....	1,832	94		70	1,079	202		28	54	57		248
August.....	2,425	92		150	1,707	192		28	56	79		121
September.....	2,835	87		150	2,123	222		28	57	90		78
October.....	2,578	29		162	1,952	238		32	31	75		59
November.....	1,826			110	1,353	228		30	25	38		45
December.....	390			1	102	187		34	11	3		62
Children under 16 years—												
January.....	17				3							14
February.....	16				2							14
March.....	73			30	3				2			38
April.....	185			35	117				4			20
May.....	382	11		35	268				5	4		20
June.....	494	15		6	364	2			5	4		8
July.....	530	33		19	404	4			5	10		55
August.....	630	36		47	512	2			5	14		14
September.....	710	31		42	610	4			4	11		8
October.....	596	18		42	508				3	11		14
November.....	396			20	354				2	6		14
December.....	21			5					1			15
Miscellaneous expenses:												
Total.....	\$3,082,771	\$1,826,590	\$735	\$74,407	\$239,619	\$191,703	\$1,014	\$77,543	\$183,981	\$430,474	\$11,458	\$45,247
Rent of works.....	\$60,565	\$60			\$13,789	\$16,420	\$72	\$13,386	\$1,150	\$11,599	\$250	\$3,833
Taxes, not including internal												
revenue.....	\$152,106	\$82,580	\$155	\$6,366	\$11,657	\$13,535	\$192	\$1,449	\$10,438	\$22,166	\$525	\$3,043
Rent of offices, interest, insur-												
ance, and all other sundry												
expenses not hitherto included.	\$1,649,537	\$738,288	\$580	\$68,041	\$212,509	\$161,556	\$750	\$62,708	\$102,532	\$253,965	\$10,677	\$37,871
Contract work.....	\$1,220,563	\$1,005,662			\$1,604	\$192			\$69,861	\$142,744		\$500
Materials used:												
Aggregate cost.....	\$15,885,354	\$3,546,208	\$13,210	\$157,306	\$2,982,025	\$3,431,955	\$78,413	\$923,915	\$1,700,298	\$2,125,825	\$218,716	\$707,483
Principal materials—												
Total cost.....	\$10,329,084	\$1,421,142	\$12,410	\$88,285	\$1,239,620	\$3,053,140	\$76,100	\$898,723	\$1,284,537	\$1,483,286	\$183,135	\$588,706
Purchased in raw state.....	\$9,813,850	\$1,421,142	\$12,380	\$88,285	\$815,267	\$3,032,525	\$75,145	\$854,511	\$1,283,377	\$1,474,195	\$183,065	\$573,958
Purchased in partially												
manufactured form.....	\$515,234		\$30		\$424,353	\$20,615	\$955	\$44,212	\$1,160	\$9,091	\$70	\$14,748
Fuel.....	\$281,052	\$146,240	\$250	\$3,108	\$55,162	\$6,867	\$675	\$4,247	\$23,619	\$31,143	\$1,097	\$8,654
Rent of power and heat.....	\$11,474					\$3,285		\$5,780	\$772	\$807	\$410	\$420
Mill supplies.....	\$22,653	\$10,383		\$995	\$3,113	\$450		\$295	\$4,354	\$2,853	\$95	\$715
All other materials.....	\$5,042,361	\$1,843,620	\$550	\$65,518	\$1,678,003	\$355,368	\$1,638	\$14,795	\$368,191	\$583,167	\$32,979	\$98,563
Freight.....	\$198,730	\$124,823			\$6,137	\$12,845		\$75	\$18,825	\$24,569	\$1,000	\$10,456

¹ Includes establishments distributed as follows: California, 13; Delaware, 1; Florida, 1; Maryland, 2; Minnesota, 1; New Jersey, 2; Pennsylvania, 1; Virginia, 4.

TABLE 23.—CANNING AND PRESERVING, FISH—DETAILED SUMMARY, BY STATES AND TERRITORIES: 1905—Continued.

	United States.	Alaska.	Illinois.	Louisiana.	Maine.	Massachusetts.	Michigan.	New York.	Oregon.	Washington.	Wisconsin.	All other states.
Products:												
Aggregate value.....	\$26,377,210	\$7,735,782	\$22,060	\$410,250	\$5,055,091	\$4,598,444	\$94,150	\$1,300,425	\$2,577,746	\$3,187,140	\$250,324	\$1,136,780
Canned fish—												
Total pounds.....	64,236,435	122,012,981		3,755,870	87,386,050	1,048,050		407,896	20,187,550	26,001,420	40,600	2,705,400
Total value.....	\$16,861,004	\$7,618,579		\$345,356	\$4,362,794	\$76,342		\$37,826	\$1,694,702	\$2,431,605	\$4,855	\$288,075
Salmon—												
Pounds.....	169,771,537	122,012,981							20,187,550	26,001,420		900,508
Value.....	\$1,843,521	\$7,618,579							\$1,694,702	\$2,431,605		\$48,575
Sardines—												
Pounds.....	87,224,524				86,218,610			145,914				800,000
Value.....	\$4,380,498				\$4,291,324			\$11,174				\$78,000
Shrimp—												
Pounds.....	3,757,310			3,755,870				1,440				
Value.....	\$345,716			\$345,356				\$360				
Mackerel—												
Pounds.....	1,598,450				173,000	802,050		6,000				587,400
Value.....	\$114,702				\$14,800	\$64,042		\$500				\$33,300
Crabs—												
Pounds.....	225,432											225,432
Value.....	\$58,753											\$58,753
Clams—												
Pounds.....	943,512				975,040							8,472
Value.....	\$54,740				\$53,670							\$1,059
Other—												
Pounds.....	745,670				60,000	240,000		254,542			40,000	144,528
Value.....	\$63,175				\$3,000	\$10,300		\$5,792			\$4,855	\$10,228
Smoked fish—												
Total pounds.....	35,439,610		187,300		10,025,323	8,020,984	1,050,000	4,623,080	77,000	6,040,500	656,635	3,250,337
Total value.....	\$2,302,740		\$22,000		\$254,155	\$304,512	\$80,500	\$777,850	\$8,100	\$505,746	\$54,800	\$225,942
Herring—												
Pounds.....	19,192,252				9,821,243	5,863,250	1,050,000	406,000		200,000		1,071,750
Value.....	\$570,852				\$200,879	\$155,814	\$80,500	\$34,534		\$8,200		\$84,925
Salmon—												
Pounds.....	6,633,560		30,000					1,880,000	75,000	4,180,500		440,400
Value.....	\$791,184		\$6,150					\$310,620	\$8,000	\$65,026		\$52,388
Flman haddock—												
Pounds.....	3,014,100				650,100	1,500,320		198,740		2,000		567,000
Value.....	\$174,234				\$38,000	\$86,315		\$10,473		\$250		\$38,260
Hallbut—												
Pounds.....	2,667,205					1,128,205				1,550,000		10,000
Value.....	\$274,118					\$120,008				\$151,400		\$2,050
Sturgeon—												
Pounds.....	1,561,800		13,300					1,523,500		5,000		50,000
Value.....	\$345,700		\$2,100					\$332,350		\$750		\$10,500
Other—												
Pounds.....	2,310,642		175,000		453,080	32,000		554,240	2,000	4,000	650,635	472,137
Value.....	\$197,592		\$13,750		\$8,346	\$2,315		\$80,852	\$100	\$120	\$54,800	\$37,210
Salted fish—												
Total pounds.....	115,218,145	4,470,000			12,561,238	69,733,584		1,350,148	7,004,091	3,504,071	3,002,150	12,503,173
Total value.....	\$6,200,556	\$114,500			\$304,284	\$5,088,331		\$80,057	\$680,464	\$172,018	\$103,503	\$507,000
Cod—												
Pounds.....	48,767,810				2,682,355	37,913,154		24,460		876,850		7,201,000
Value.....	\$3,013,320				\$141,345	\$2,511,150		\$2,215		\$40,300		\$300,235
Herring—												
Pounds.....	15,504,192				1,853,800	9,131,500		812,830		750,000	188,570	2,707,333
Value.....	\$401,223				\$41,567	\$217,824		\$37,757		\$20,000	\$5,385	\$72,700
Salmon—												
Pounds.....	14,123,741	4,357,430							6,000,001	1,243,221		1,523,000
Value.....	\$697,000	\$112,084							\$680,284	\$72,232		\$124,300
Mackerel—												
Pounds.....	8,320,500					8,221,500						105,000
Value.....	\$678,326					\$608,320						\$10,000
Haddock—												
Pounds.....	4,737,975				611,171	4,101,804						25,000
Value.....	\$213,594				\$17,238	\$194,050						\$1,500
Other—												
Pounds.....	23,767,852	122,251			7,413,813	10,305,500		512,838	5,000	734,000	3,713,580	910,850
Value.....	\$896,393	\$1,445			\$194,144	\$306,303		\$40,085	\$200	\$24,420	\$184,208	\$3,025
All other products.....	\$952,820	\$2,674		\$64,003	\$43,858	\$100,250	\$4,050	\$404,083	\$185,400	\$17,780	\$0,010	\$74,203
Power:												
Number of establishments reporting.....	109	49		2	53	17	3	9	19	33	2	12
Total horsepower.....	7,274	2,310		35	1,712	232	8	102	1,084	1,350	38	394
Owned—												
Engines—												
Steam—												
Number.....	324	146		3	56	5			42	55	1	16
Horsepower.....	6,240	2,160		35	1,604	110			734	1,274	25	208
Gas or gasoline—												
Number.....	35	8			13		3	2	4	3		2
Horsepower.....	302	84			80		8	15	48	37		90
Water wheels—												
Number.....	4	2							2			
Horsepower.....	261	61							200			
Water motors—												
Number.....	3					2			1			
Horsepower.....	33					28			5			
Electric motors—												
Number.....	13	1			4				5	2		1
Horsepower.....	62	5			28				44	9		6
Other power, horsepower.....	3					3						
Rented—												
Electric motors—												
Number.....	38					16		6	6	6	4	
Horsepower.....	233					91		37	53	30	13	
Other kind, horsepower.....	50							50				

CANNING AND PRESERVING, OYSTERS.

Table 24 is a comparative summary of the statistics for the establishments engaged in canning and preserving oysters, as reported at the censuses of 1900 and 1905, with percentages of increase during the period.

TABLE 24.—*Canning and preserving, oysters—comparative summary, with per cent of increase: 1905 and 1900.*

	CENSUS.		Per cent of increase.
	1905	1900	
Number of establishments.....	69	23	200.0
Capital.....	\$2,599,563	\$441,691	488.5
Salaried officials, clerks, etc.:			
Number.....	186	40	365.0
Salaries.....	\$120,867	\$31,831	279.7
Wage-earners, average number.....	3,291	1,335	146.5
Total wages.....	\$547,909	\$250,425	118.8
Men 16 years and over.....	906	643	40.9
Wages.....	\$282,857	\$171,915	64.5
Women 16 years and over.....	1,632	505	223.2
Wages.....	\$195,514	\$61,865	216.0
Children under 16 years.....	753	187	302.7
Wages.....	\$69,538	\$16,645	317.8
Miscellaneous expenses.....	\$232,594	\$23,607	885.3
Cost of materials used.....	\$2,590,872	\$837,380	209.4
Value of products.....	\$3,986,239	\$1,252,803	218.2
Canned oysters.....	\$3,415,186	\$965,215	253.8
Other products.....	\$571,053	\$287,588	98.6

¹ Exclusive of the statistics of establishments classified as "canning and preserving, fruits and vegetables" and "canning and preserving, fish." These establishments canned oysters in 1905 to the value of \$384,226 and in 1900 of \$1,049,585. Also exclusive in 1905 of the statistics of establishments engaged primarily in the manufacture of other products which canned oysters to the value of \$12,900.

As has been previously indicated, the difference in the methods employed at the census of 1900 and those employed at the present census was such that it was necessary to revise the figures for 1900 to make them comparable with those for 1905. According to the revised figures, in 1900 there were 23 establishments engaged primarily in the canning of oysters. These establishments showed an investment of capital amounting to \$441,691, employed 1,335 wage-earners, paid in wages the sum of \$250,425, and reported a product of \$1,252,803. In addition to this, oysters to the value of \$1,049,585 were canned by establishments the principal product of which was either fruits and vegetables or fish. As it is impossible to separate the capital, wage-earners, and wages for this part of the industry, the figures for such establishments are not included in the above table. In 1905 the number of establishments which reported canned oysters as their principal product had increased to 69, or three times the number reported in 1900. The capital invested increased to \$2,599,563, or 488.5 per cent; wage-earners increased to 3,291, or 146.5 per cent;

and wages to \$547,909, a gain of 118.8 per cent. The value of products increased to \$3,986,239, a gain of 218.2 per cent.

While the number of establishments increased 200 per cent, the capital invested shows an increase of 488.5 per cent, showing that the average capital per establishment has considerably increased since 1900. The percentage of increase for value of products was 218.2, and indicates a slightly larger average product than was reported in 1900. In 1905 oysters to the value of \$384,226 were reported as partial products of fruit and vegetable canning establishments, and are not included in the figures shown in Table 24.

In classifying the returns for the census of 1905, establishments engaged in the canning of clams were classified under "canning and preserving oysters." Returns received for 11 establishments from the state of Maine were thus classified, although there were no oysters canned in the state. There were also similar establishments in other states. In addition to this some of the establishments engaged in canning oysters as a major product also canned shrimp and other material, so that in considering the figures presented in Table 45 it should be borne in mind that they do not represent exclusively the canning and preserving of oysters.

As shown by this table, Mississippi led all the other states in value of oysters canned in 1905. Out of a total value of \$3,986,239 for the United States, this state produced \$1,502,497, increasing from \$569,000 in 1900. The other 3 leading states ranked according to value of products in 1905 were South Carolina, \$568,239; Louisiana, \$509,325; and Georgia, \$256,750. If the value of oysters canned by establishments given other classifications were taken into consideration, Maryland would have been the leading state in 1900, although there were no establishments reported in that year in which the principal product was canned oysters, and would have occupied the second place in 1905. Thus it appears that the greatest proportion of the oysters canned and preserved in the country are packed by the states bordering on the Atlantic from Maryland to South Carolina, and in Mississippi and Louisiana on the Gulf of Mexico.

Table 25 is a comparative summary, by states, of the statistics for establishments engaged in canning and preserving oysters, as reported at the censuses of 1900 and 1905.

TABLE 25.—CANNING AND PRESERVING, OYSTERS—COMPARATIVE SUMMARY, BY STATES: 1905 AND 1900.

STATE.	Census.	Number of establishments.	Capital.	WAGE-EARNERS AND WAGES.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Average number.	Wages.			
United States.....	1905 1900	69 23	\$2,500,503 441,091	3,201 1,335	\$547,000 250,425	\$232,594 23,607	\$2,590,872 837,380	\$3,086,230 1,262,803
California ¹	1905	4	493,170	45	31,830	36,633	123,006	227,702
Florida.....	1905 1900	7 6	87,252 78,895	177 148	24,671 32,302	5,145 5,881	79,252 48,020	134,002 100,543
Georgia ²	1905	5	109,245	508	54,305	7,760	150,633	250,750
Louisiana.....	1905 1900	6 3	388,460 64,250	282 97	55,090 33,915	21,726 3,123	361,891 109,205	509,325 165,458
Maine ¹	1905	11	24,714	120	25,359	2,104	74,175	125,541
Maryland ¹	1905	4	70,300	78	17,051	6,033	160,790	220,162
Mississippi.....	1905 1900	8 4	905,027 205,549	753 419	171,214 81,954	95,016 8,518	1,020,504 427,490	1,502,497 509,000
North Carolina ²	1905	5	93,400	142	23,070	19,325	128,705	176,773
South Carolina ²	1905	9	169,770	1,034	110,734	19,812	345,870	568,239
Washington.....	1905 1900	5 3	40,207 9,800	33 24	17,245 12,070	5,734 1,240	17,413 38,061	60,475 65,980
All other states.....	*1905 *1900	5 7	110,000 83,197	50 647	17,331 90,094	13,308 4,830	110,633 214,595	204,083 351,822

¹ None reported in 1900.² Included in "all other states" in 1900.³ Includes establishments distributed as follows: Alabama, 1; New York, 1; Oregon, 2; Virginia, 1.⁴ Includes establishments distributed as follows: Alabama, 1; Delaware, 1; Georgia, 1; Iowa, 1; North Carolina, 1; South Carolina, 1; Virginia, 1.

Table 26 shows the rank of the several states according to number of establishments and value of canned oysters. In the preparation of this table, all establishments at which oysters were canned have been included, whether the oysters were the principal or a minor product. In determining the value of products, all products except oysters have been omitted.

TABLE 26.—Canning and preserving, oysters—rank of states by number of establishments and value of canned oysters: 1905 and 1900.

STATE.	RANK ACCORDING TO—			
	Number of establishments.		Value of canned oysters.	
	1905.	1900.	1905.	1900.
Mississippi.....	3	2	1	2
Maryland.....	1	1	2	1
South Carolina.....	2	0	3	0
Louisiana.....	5	4	4	0
Georgia.....	6	0	5	7
California.....	8	(¹)	6	(¹)
North Carolina.....	7	0	7	3
Florida.....	4	2	8	4
Alabama.....	0	0	9	5
Oregon.....	0	0	10	8
New York.....	0	(¹)	11	(¹)
Washington.....	(¹)	4	(¹)	10
Iowa.....	(¹)	6	(¹)	11

¹ None reported.

According to Table 26, Mississippi in 1905 was first in value of oysters canned and third in number of establishments, while in 1900 it was second in both. Maryland was first in both number of establishments and value of canned oysters in 1900, and first in num-

ber of establishments in 1905, but second in value of canned oysters. The other states prominent in the industry are: South Carolina, which was third in value of canned oysters in 1905 and ninth in 1900; Louisiana, which was fourth in 1905 and sixth in 1900; and Georgia which was fifth in 1905 and seventh in 1900.

Table 27 shows the quantity and value of canned oysters for 1905, by states, arranged in order of total production. In the preparation of this table the unit of pounds which has been used in other tables of canned oysters has been changed to cases. In making this reduction the different sizes of cans in which oysters are packed have been reduced to the standard of the number 2, or 2-pound can, and the unit of cases represents 24 number 2 cans. The figures in Table 27 also include the cases and value of oysters reported as minor products of establishments coming under other classifications.

TABLE 27.—Quantity and value of canned oysters, by states: 1905.

(Canning season of 1904.)

STATE.	Cases.	Value.
United States.....	1,234,355	\$3,700,412
Mississippi.....	457,330	1,340,042
South Carolina.....	102,733	820,511
Louisiana.....	148,452	507,373
Maryland.....	138,878	548,046
Georgia.....	90,881	250,750
California.....	73,040	222,617
North Carolina.....	62,020	144,273
Florida.....	37,532	125,000
All other states.....	33,271	123,700

Table 27 shows that Mississippi was first in number of cans of oysters packed, that state reporting 457,339 cases, with a value of \$1,340,942, out of a total for the United States of 1,234,355 cases, valued at \$3,799,412, or a little less than one-third of the total production of the country. South Carolina with 192,733 cases, valued at \$529,511, and Louisiana with 148,452 cases, valued at \$507,373, held second and third rank, respectively. Maryland was fourth in quantity, with 138,878 cases, and second in value, with \$548,646, indicating that the value of the Maryland oyster is greater than that of either of the two preceding states. And a study of the figures also reveals the fact that the value per case of Maryland oysters was greater than that of any other state. Next in order after Maryland

are Georgia with 99,881 cases, valued at \$256,750; California with 73,640 cases, valued at \$222,617; North Carolina with 52,629 cases, valued at \$144,273; and Florida with 37,532 cases, valued at \$125,600. The combined product of the other states amounted to 33,271 cases, valued at \$123,700.

Table 28 is a detailed statement, by states, of the statistics of the oyster canning and preserving industry as returned at the census of 1905. As in the case of fruits and vegetables in Table 15, it has been found necessary to include in the group of "all other states" some states reporting three or more establishments, to avoid disclosing operations of individual establishments.

TABLE 28.—CANNING AND PRESERVING, OYSTERS—DETAILED SUMMARY, BY STATES: 1905.

	United States.	Florida.	Georgia.	Louisiana.	Maine.	Maryland.	Mississippi.	South Carolina.	Washington.	All other states. ¹
Number of establishments.....	09	7	5	0	11	4	8	0	5	14
Capital:										
Total.....	\$2,599,563	\$87,252	\$109,245	\$388,400	\$24,714	\$70,300	\$965,027	\$109,770	\$46,207	\$702,570
Land.....	\$141,070	\$3,500	\$1,500	\$1,550	\$1,420	\$15,300	\$32,000	\$4,400	\$0,050	\$74,450
Buildings.....	\$420,239	\$18,300	\$13,250	\$97,255	\$7,060	\$12,000	\$118,474	\$25,000	\$3,500	\$130,800
Machinery, tools, and implements.....	\$419,083	\$17,300	\$36,700	\$100,571	\$7,470	\$8,000	\$138,504	\$51,182	\$5,500	\$54,450
Cash and sundries.....	\$1,011,971	\$48,152	\$57,705	\$189,093	\$8,158	\$41,000	\$675,149	\$119,197	\$30,657	\$442,870
Proprietors and firm members.....	93	8	5	7	10	7	13	11	11	21
Salaries:										
Total number.....	186	19	16	27	11	15	54	20	.....	24
Total salaries.....	\$120,867	\$7,996	\$10,445	\$15,500	\$3,333	\$8,815	\$30,038	\$13,540	.....	\$31,200
Officers of corporations:										
Number.....	10	.....	1	2	6	1	2	2	.....	5
Salaries.....	\$22,733	.....	\$600	\$3,500	\$1,343	\$180	\$900	\$4,200	.....	\$12,010
General superintendents, managers, clerks, etc.:										
Total number.....	107	19	15	25	5	14	52	18	.....	10
Total salaries.....	\$98,134	\$7,996	\$0,845	\$12,000	\$1,090	\$8,035	\$20,138	\$0,340	.....	\$19,190
Men:										
Number.....	158	19	15	24	5	13	48	17	.....	17
Salaries.....	\$94,164	\$7,996	\$0,845	\$11,800	\$1,000	\$8,135	\$27,118	\$8,840	.....	\$18,440
Women:										
Number.....	0	.....	.....	1	.....	1	4	1	.....	2
Salaries.....	\$3,970	.....	.....	\$200	.....	\$500	\$2,020	\$500	.....	\$750
Wage-earners, including pieceworkers, and total wages:										
Greatest number employed at any one time during the year.....	7,262	416	1,286	901	840	218	1,591	1,700	102	576
Least number employed at any one time during the year.....	5,101	339	070	308	283	94	1,230	1,588	50	404
Average number.....	3,291	177	608	282	120	78	753	1,034	33	246
Total wages.....	\$547,909	\$24,671	\$54,305	\$55,090	\$25,359	\$17,051	\$171,214	\$110,734	\$17,245	\$72,231
Men 16 years and over:										
Average number.....	900	35	00	76	44	73	245	190	12	159
Wages.....	\$282,857	\$10,579	\$22,315	\$22,424	\$14,554	\$10,517	\$85,707	\$38,750	\$9,471	\$62,474
Women 16 years and over:										
Average number.....	1,032	104	266	102	04	4	348	505	18	71
Wages.....	\$195,614	\$11,028	\$18,108	\$20,918	\$0,085	\$438	\$63,537	\$50,050	\$7,866	\$8,348
Children under 16 years:										
Average number.....	753	38	230	44	12	1	160	243	3	15
Wages.....	\$60,538	\$3,064	\$13,822	\$5,757	\$1,150	\$00	\$21,010	\$21,922	\$408	\$1,409
Average number of wage-earners, including pieceworkers, employed during each month:										
Men 16 years and over:										
January.....	1,617	70	130	151	.....	144	415	322	14	292
February.....	1,479	70	123	140	.....	105	400	325	26	299
March.....	1,403	73	106	90	11	101	400	329	30	203
April.....	1,202	02	105	70	51	53	395	330	30	100
May.....	288	.....	1	24	54	9	38	08	23	71
June.....	145	.....	.....	.....	27	9	18	3	19	69
July.....	93	.....	.....	.....	2	3	18	3	1	66
August.....	08	.....	.....	.....	2	8	18	3	1	00
September.....	340	.....	8	.....	91	73	45	53	.....	79
October.....	1,177	28	08	87	108	100	203	204	.....	192
November.....	1,620	38	100	108	107	123	428	324	.....	235
December.....	1,692	04	112	170	77	139	406	328	.....	236
Women 16 years and over:										
January.....	2,062	222	400	300	.....	.....	563	014	23	171
February.....	2,010	217	473	290	.....	.....	501	024	39	172
March.....	2,010	215	472	240	40	.....	490	028	48	177
April.....	2,606	143	401	223	104	.....	580	040	47	08
May.....	780	.....	10	25	109	0	135	430	32	9
June.....	208	.....	.....	.....	41	0	100	25	27	9
July.....	38	.....	.....	.....	5	.....	.....	25	.....	8
August.....	41	.....	.....	.....	8	10	.....	25	.....	1
September.....	558	.....	12	.....	90	18	64	375	.....	1
October.....	2,091	102	407	283	143	10	413	720	.....	03
November.....	2,097	101	440	315	140	.....	040	010	.....	85
December.....	2,741	188	448	318	91	.....	000	018	.....	88
Children under 16 years:										
January.....	1,200	87	416	75	.....	.....	234	400	10	82
February.....	1,273	92	413	70	.....	.....	220	423	8	37
March.....	1,232	70	408	48	5	.....	223	423	0	40
April.....	1,201	59	405	48	8	.....	252	409	0	14
May.....	181	.....	.....	25	10	.....	50	83	.....	4
June.....	53	.....	.....	.....	.....	.....	39	8	.....	6
July.....	14	.....	.....	.....	.....	.....	.....	8	.....	6
August.....	12	.....	.....	.....	.....	4	.....	8	.....	.....
September.....	100	.....	6	.....	32	6	58	58	.....	.....
October.....	989	25	377	65	32	2	202	278	.....	8
November.....	1,292	48	400	98	32	.....	292	402	.....	20
December.....	1,364	00	407	90	25	.....	332	410	.....	25
Miscellaneous expenses:										
Total.....	\$232,594	\$5,145	\$7,700	\$21,726	\$2,104	\$0,633	\$95,010	\$10,812	\$5,794	\$60,204
Rent of works.....	\$12,270	\$465	\$1,080	\$15	\$225	\$1,000	\$501	\$1,400	\$300	\$7,230
Taxes, not including internal revenue.....	\$9,083	\$233	\$1,180	\$1,348	\$101	\$652	\$3,250	\$1,794	\$214	\$915
Rent of offices, interest, insurance, and all other sundry expenses not hitherto included.....	\$200,582	\$4,447	\$5,404	\$20,363	\$1,088	\$4,481	\$91,265	\$10,558	\$5,220	\$51,060
Contract work.....	\$10,053	.....	.....	.....	.....	.....	.....	.....	.....	\$10,053
Materials used:										
Aggregate cost.....	\$2,590,872	\$70,252	\$150,033	\$361,801	\$74,175	\$100,790	\$1,020,504	\$345,870	\$17,413	\$371,344
Principal materials:										
Total cost.....	\$1,587,010	\$38,104	\$88,548	\$226,205	\$41,309	\$151,721	\$540,525	\$205,143	\$8,080	\$278,300
Purchased in raw state.....	\$1,587,310	\$38,004	\$88,548	\$226,205	\$41,209	\$151,721	\$540,525	\$205,143	\$8,080	\$278,200
Purchased in partially manufactured form.....	\$300	\$100	.....	.....	\$100	.....	.....	.....	.....	\$100
Fuel.....	\$47,155	\$989	\$840	\$6,815	\$1,345	\$410	\$25,220	\$5,480	\$840	\$5,207
Rent of power and heat.....	\$25	.....	.....	.....	.....	.....	.....	.....	.....	\$25
Mill supplies.....	\$4,702	\$135	\$20	\$900	\$30	\$5	\$2,980	\$408	\$50	\$300
All other materials.....	\$937,453	\$35,744	\$61,225	\$127,812	\$30,437	\$8,020	\$461,779	\$133,056	\$7,709	\$80,972
Freight.....	\$13,027	\$4,280	.....	\$300	\$1,045	\$25	.....	\$1,723	\$20	\$9,534

¹ Includes establishments distributed as follows: Alabama, 1; California, 4; New York, 1; North Carolina, 5; Oregon, 2; Virginia, 1.

TABLE 28.—CANNING AND PRESERVING, OYSTERS—DETAILED SUMMARY, BY STATES: 1905—Continued.

	United States.	Florida.	Georgia.	Louisiana.	Maine.	Maryland.	Mississippi.	South Carolina.	Washington.	All other states.
Products:										
Aggregate value.....	\$3,986,239	\$134,092	\$256,750	\$509,325	\$125,541	\$220,162	\$1,502,497	\$568,239	\$60,475	\$609,158
Canned products—										
Total pounds.....	58,753,876	1,801,536	4,794,300	7,131,469	2,038,518	1,591,894	23,284,467	9,345,450	508,900	8,259,342
Total value.....	\$3,846,824	\$125,600	\$256,750	\$507,725	\$123,379	\$216,709	\$1,475,457	\$535,186	\$60,475	\$545,543
Oysters—										
Pounds.....	53,935,107	1,801,536	4,794,300	7,125,684	—	1,352,212	21,952,258	9,251,200	—	7,657,917
Value.....	\$3,415,186	\$125,600	\$256,750	\$507,373	—	\$164,420	\$1,340,942	\$529,511	—	\$490,590
Clams—										
Pounds.....	2,856,695	—	—	—	1,825,270	2,775	—	50,000	481,900	526,750
Value.....	\$219,426	—	—	—	\$110,826	\$830	—	\$3,600	\$57,475	\$46,095
Shrimp—										
Pounds.....	1,330,085	—	—	5,785	—	—	1,314,775	6,250	—	3,275
Value.....	\$133,215	—	—	\$352	—	—	\$132,015	\$500	—	\$348
Crabs—										
Pounds.....	217,424	—	—	—	—	174,990	17,434	—	25,000	—
Value.....	\$44,199	—	—	—	—	\$38,669	\$2,500	—	\$3,000	—
Other—										
Pounds.....	384,565	—	—	—	213,248	61,917	—	38,000	—	71,400
Value.....	\$34,798	—	—	—	\$12,553	\$12,760	—	\$1,575	—	\$7,910
All other products.....	\$139,415	\$8,492	—	\$1,600	\$2,162	\$3,453	\$27,040	\$38,053	—	\$63,615
Power:										
Number of establishments reporting.....	33	2	—	5	3	—	8	4	3	8
Total horsepower.....	1,243	56	—	105	60	—	510	270	55	187
Owned—										
Engines—										
Steam—										
Number.....	47	2	—	6	3	—	19	6	4	7
Horsepower.....	1,189	56	—	105	60	—	497	270	17	184
Gas or gasoline—										
Number.....	3	—	—	—	—	—	1	—	2	—
Horsepower.....	40	—	—	—	—	—	2	—	38	—
Water motors—										
Number.....	1	—	—	—	—	—	1	—	—	—
Horsepower.....	1	—	—	—	—	—	1	—	—	—
Electric motors—										
Number.....	2	—	—	—	—	—	1	—	—	1
Horsepower.....	11	—	—	—	—	—	10	—	—	1
Rented—										
Electric motors—										
Number.....	1	—	—	—	—	—	—	—	—	1
Horsepower.....	2	—	—	—	—	—	—	—	—	2

HISTORICAL AND DESCRIPTIVE.

The seasons when fruits and vegetables can be obtained in their natural state are short, and therefore much time and study have been devoted to methods of preserving these products for use when out of season and in localities where they are not grown.

The first processes employed for this purpose were drying and the use of salt in pickling, and these are among the principal methods of preservation in use at the present time. Their utility is limited, however, and, as civilization advanced, a method was sought whereby fruits and vegetables could be preserved more nearly in a natural condition. During the early days of the last century a great deal of attention was given the subject in France on account of a reward of 12,000 francs offered by the French Government for a method of preserving food for use by the navy. The process of canning in hermetically sealed cans was finally discovered by M. Appert, of that country, and the first authentic information we have in regard to it is a work written by him and published in 1810 by authority of the French Government. There have been so many improvements on his methods that his book is now of little practical use to canners, and is of value principally as a bit of history. To him, however, we owe the discovery and clear exposition of the principles that underlie the process in this, one of the most impor-

tant of modern enterprises, and he may well be called the father of the canned goods industry.

It is a well established fact that the decomposition of food is due to the action of a living organism known as "ferment." Heating food to a temperature sufficient to kill all organisms present, and preventing the introduction of others by hermetically sealing the package, makes preservation for an indefinite period possible. It was upon this theory that Appert worked and made his successful experiments. When the germs of fermentation or putrefaction are killed by heat, the air must be excluded immediately, or others, which are present almost everywhere in the air, will enter the substance and again affect it. There are two ways of accomplishing this: The air may be excluded while the temperature is still high enough to kill the germs, or the substance may be again heated after the cans have been made air tight. As the cans can not readily be handled at high temperatures, the latter method is more preferable. It is, moreover, a great deal more reliable, and for these reasons is the one in use at all canning establishments.

It is also a fact that certain chemicals, known as antiseptics, among which are salicylic and boracic acids, benzoate of soda, and others, when added to food, will kill the organisms present, and thus preserve it from decay. There have been many arguments against the use of these chemicals, because of their

alleged harmful properties. They do not add anything to the nutritive value of the food and are not necessary for sterilization. The most approved practice is to sterilize the goods either directly or indirectly by the use of steam heat.

In Appert's description of his process, he says: "I chose glass as the matter most impenetrable by air, and have not ventured to experiment with vessels of any other substance." In 1810 Peter Durand took out a patent in England, venturing a step further than Appert, his patent covering "vessels made of glass, pottery, tin, or other metals or fit materials." This is the first mention of the use of tin as a package for hermetically sealed food, and to Durand is due the credit of first using the material for packages, thus making the general use of Appert's invention possible. Because of the greater cost of packages made of glass or pottery, the increased care necessary for their use in packing processes, and their impracticability for transportation on account of their weight and liability to breakage, the extraordinary growth of this industry is due in no small degree to the invention of tin cans.

Among the first to introduce canning into the United States was Thomas Kensett, who learned the art in England before his immigration to this country. In 1825 he and Ezra Daggert, with whom he was associated in business, obtained a patent from the United States Government on an improvement in the art of preserving. Owing to many adverse conditions the industry was of comparatively small importance until about 1850. During the next few years the development was very rapid and the variety of goods packed increased, and included fruits, vegetables, oysters, fish, and meats. Maryland soon became the chief center of the industry, but Maine, New York, and New Jersey were also prominent. California and the states of the middle West show a large growth in recent years, and the industry is fast extending to all parts of the country.

Changes in methods have kept pace with the growth of the industry, or rather have set the pace for it. While the underlying principles have remained the same, the use of improved machinery has done away with many laborious processes, cheapened the cost of production, increased the output, lessened the proportion of spoiled goods, and is largely responsible for the present magnitude of the business. In the eighties the growth of the industry was little less than phenomenal. New canning establishments sprang up in all parts of the country. The newer plants, with less skilled labor and more unscrupulous managers, endeavored to surpass the older established packers in the quantity of goods put up. This naturally resulted in the market becoming flooded with goods, a considerable portion of which were cheap and unwholesome. The public became dissatisfied with the goods put out, and the demand decreased, driving many of the plants out of business and making it necessary for the older

packers to put up nothing but first-class goods. The prejudice thus engendered in the public mind has been a difficult one to eradicate, and has worked inestimable harm to the industry.

Fruits and vegetables.—The first successful efforts in canning were made with fruits and vegetables, as the earlier processes were more applicable to these goods.

While we find that Kensett was packing canned goods in hermetically sealed cans as early as the year 1819, the business was really in an experimental stage, and did not develop into an industry of importance until several years afterwards. In the beginning efforts were directed to securing a process by which sugar corn could be canned for market, and Isaac Winslow was probably the first to successfully accomplish this. His experiments were made in 1842, and he applied for a patent on his process, which was finally granted in 1863. Tomatoes, called "love apples" by Appert in his work on canning, were first packed for commercial purposes in 1847, at which time Harrison W. Crosby commenced packing them at Jamesburg, N. J. Thus, during the decade from 1840 to 1850, the practicability of Appert's processes was established by American canners. The success of the pioneers of the industry in disposing of their goods attracted capital, giving the necessary impetus, and from that time the industry developed rapidly.

The fundamental principles first employed in canning processes have continued to the present time, and it is in the invention and use of labor saving devices that great advancement has been made. As an instance, at first corn was cut from the cob by hand and placed in the can, together with a small quantity of sirup, or water to which sugar and salt had been added. The tops were then soldered on by hand with the use of a tinner's copper, and the cans placed in the cooking kettle, where they were left in boiling water for from thirty to sixty minutes. A small hole was then made by pricking the can, and the heated air and vapor allowed to escape, after which the can was again sealed and returned to the kettle of boiling water, where it was necessary to keep it for several hours. This method of operation is now entirely obsolete. The continuous cutters of the present time are run by power, and cut the corn from a continuous stream of cobs as fast as the ears can be fed into the machine. The corn then goes through the silking machines, where a considerable part of the silk not removed in husking is separated. From the silker it passes to the steam cooker, where the sirup is added, and the mixture undergoes a cooking process. The cooker then takes the cans from a chute and automatically fills them with corn, the machine being so regulated that the same amount of corn goes into each can. The cans are then wiped and the caps put in place and passed on to the power capper. This power capper, which is a machine having 6 or 12 capping irons, solders the caps on the 6 or 12 cans as quickly as a man could cap one

can by the old hand process. Each cap has a small hole or vent in the center, left to permit the escape of steam during the capping process. This hole is then closed with a drop of solder and the cans inspected for leaks. They are then passed on to the steam process kettle, where they are heated to a degree and for a length of time sufficient to insure the destruction of all living germs. The degree of heat and the length of time necessary to accomplish this varies according to the kind of goods in process. Green corn requires the highest degree of heat for its preservation, and strawberries about the lowest, the amount of acid present having much to do with this difference. In the early days of the canning industry this processing was done in pans set on brick arches; these in time gave way to the steam boiler or open retorts. But the boiling point was the greatest heat to be obtained by such methods, and some kinds of canned goods required a higher temperature to insure their preservation. This led to the closed steam retorts of the present time, in which any desired temperature can be obtained. By the use of the closed retort corn is now subjected to a temperature of approximately 250° F., and requires only about an hour for processing, where it required from five to six hours by the old method.

In the canning of peas, also, the advance in the use of machinery is particularly noticeable. A few years ago peas were picked from the vines by hand, and were brought to the factory in the pods, where they were shelled by hand. The expense of picking the peas in the field and shelling them at the factory was enormous, and kept the price of canned peas at a high figure until the invention of the pea huller, a machine which was capable of shelling over a thousand bushels of peas in a day of ten hours. This machine was soon supplanted by another called the viner, which takes the peas from the vine and shells them at the same time. The practice at present is to mow the pea vines and carry them to the factory, where they are fed into the viner, which separates the peas from the vines much as a grain thrasher separates the grain from the straw.

The peas are then sent to the cleaners, where various mechanical devices are employed to remove dirt and pieces of leaves or pods. They are then taken to the graders, which are long cylinders perforated the entire length with holes the size of the different grades of peas, the small size first, the next larger, etc. These cylinders are set at an incline and kept constantly revolving. The peas first pass over the portion perforated by the smallest size holes, through which the small peas pass, the next larger ones passing through the next set of perforations, and in this way the various sizes or grades are separated. They are then sorted by girls who pick out imperfect and offcolored peas, pieces of leaves, etc., that may have passed through the cleaner. The peas are next put into small tanks of water, where they are cooked from four to six minutes, then rinsed in cold water and

poured into cans, which are placed on scales and weighed to insure uniformity in the quantity of peas they contain. The cans are then filled with sirup and passed into the exhaust box, where all air that may have been in the peas when they were put in the can is exhausted by the use of steam. The cans then pass to the capper and follow the same process described in the case of corn. All canned goods are subjected to practically the same process, the only difference in canning being the methods of preparation for the can and the different lengths of time or degree of temperature that each may require in the process kettle.

Fish.—While the canning of fish was carried on to some extent in the United States previous to 1843, the real commencement of the industry dates from that time, when the firm of Treat, Noble, & Halliday, of Eastport, Me., began the canning of lobsters and mackerel. This firm found a ready market for their products, and their success led others to engage in the industry. During the next twenty years canning establishments were started all along the coast of Maine, from which point the business spread to other parts of the country. The beginning of the industry on the Pacific coast was due largely to William Hume, who obtained his knowledge of the work in Maine, leaving that state for California in 1853. In 1864 he started the business in Sacramento, Cal., in partnership with his brother, George W. Hume, and with A. S. Hapgood, both likewise from New England, where they had acquired a knowledge of processes used in canning lobsters and oysters.

In the bulletin of the United States Fish Commission for 1885, Mr. Hume is quoted as follows: "To introduce our goods, I used to fill a basket with cans, take it on my arm, and starting out among the families of my acquaintance, give to each a can, explaining how the fish was put up, insisting that it was a valuable article of food, and inviting them to try it. That was twenty years ago. Now, canned salmon can be obtained in every market of the world. But that was the beginning of it." During a visit to Oregon in 1865, Mr. Hume saw the possibilities that the Columbia river possessed for the industry, and in 1868 was actively engaged in canning salmon on the banks of that river.

The process of canning fish is very similar to that employed for fruits and vegetables, therefore the methods used in salmon canning establishments are briefly described. It is said that fish should be out of the water twenty-four hours before packing to allow them to shrink, as when packed perfectly fresh so much juice is formed that in "blowing," after cooking, light weights are produced. As soon as received the salmon are placed in bins which are near the butcher's table where they are cleaned. A stream of water is kept playing over them while in the bins to remove the dirt and slime. They are then transferred

to the table where the butcher removes the head, fins, and viscera. The fish is then placed in a tank of water where it is washed and scraped and its tail is removed. It is then passed to another tank of water where it receives a second washing and scraping, and a final brushing with a whisk-like broom. When thoroughly clean, the fish are removed to large bins on either side of the cutting machine.

There is great variation at different canneries in all the processes, but one principle in cutting is universally observed—that is, to cut the fish transversely in sections the exact length of the can. This cutting is done by means of gang knives, by which the entire fish is cut into several pieces at one stroke. The pieces are then filled into the cans, most canneries using filling machines for the ordinary tall or 1-pound can; all fancy cans, such as "flats," "elliptical," "half pound," etc., are filled by hand. After filling, the cans are inspected, and if for export trade, are carefully weighed so there may be no short weight. If they are not quite full, a small quantity of fish is added, a supply of small bits being kept on hand for this purpose. The tops are then put on and soldered, this process being done in most cases by machines specially constructed for the purpose. When the can emerges from the soldering machine it rolls down a trough and under several jets of water to cool. As it comes from the trough it is placed on a table where laborers seal by hand the central vent which has been left open to let the air escape, as the can becomes quite hot in the capping process and in the soldering machine. The cans are then placed in trays and lowered into wooden tanks filled with steam heated water to test for leaks. After this test the cans are placed in the steam retort for the first cooking. It is necessary not only to cook the flesh thoroughly, but also to cook the bones until they will crumble to pieces easily, for if this is not done, the contents of the can may spoil. The trays with the hot, steaming cans, bulged out at the ends by the pressure of the steam within, are then placed on tables where they are tested by the process known as "blowing" or "venting." Men with small wooden mallets, which have on the broad face an awl-like point, tap the top of one can after another, making a small perforation in each. A fountain-like jet caused by the escaping steam at once appears, carrying some of the liquor with it. The vents, after blowing, are immediately soldered, and then the can is placed in a second retort for final cooking. The reason for two separate cooking operations is that, if the cans are kept in the first retort a sufficient length of time to complete the cooking, the pressure of the steam generated in the cans would ruin them. After being taken from the second retort, the cans are subjected to a lye bath to remove the grease and dirt, and then, when the lye has been washed off with fresh water, they are sent to the cooling room. After cooling, the cans are lacquered, labeled, and cased and are then ready for the market.¹

Next in importance to the salmon canning of Alaska and the Columbia river comes the sardine packing in the state of Maine. The Maine sardine is the young of the sea herring, which is very plentiful along the coast of that state. The process used in canning sardines differs considerably from that used for salmon. The fish is first fried in oil and then canned in the same substance, cottonseed oil being the kind most generally used in the Maine canneries. Sardines are also packed in mustard, tomato sauce, and other condiments.

Oysters.—Probably the first person to can oysters in this country was Thomas Kensett, who is known to have been engaged in this branch of the industry as early as 1822. Baltimore, Md., because of its close proximity to the oyster beds of Chesapeake bay, naturally became the center of the industry, and for many years more oysters were canned in Maryland than in any other state. During the last census year, however, the statistics for Maryland indicate a decline in the industry there, the bulk of the business being carried on by the more southern states.

Improvements of method in oyster canning have been as marked as in the other branches of the canning industry. One of the most important difficulties overcome was that found in opening or shucking the oyster. At first the oyster shells were opened by hand. The first improvement over this method was introduced in 1858 by Louis McMurtry, of Baltimore, who discovered that scalding the oyster in the shell caused it to open to a considerable degree, making it easier to remove the meat. Two years later this process was replaced by the steam box, which is generally used at the present time.

The canneries are usually located at the water's edge where they have their own wharves, alongside of which the oysters are brought by boat. From the wharf to the shucking room, small cars, about 5 or 6 feet in length, are run. These cars are filled on the wharf with baskets each containing about 3 pecks of oysters just as they are brought from the beds. The cars are then pushed into the steam chest, which is a rectangular box large enough to hold 2 or 3 cars at once. The box is air-tight and fitted with appliances for the admission of steam. The doors at the end are closed and the steam turned on for ten to fifteen minutes. The hot steam causes the shells to open somewhat, and the shuckers, to whom the oysters are next carried, are thus enabled to remove the meat from the shell very easily with a knife. After the oysters are shucked, they are washed and packed into cans, which are weighed to secure uniformity in the quantity of oysters in each can. The subsequent processes are practically the same as in canning fruits and vegetables. The canned oysters pass through the exhaust box and capping machines, being vented and returned to the process kettle, where they are heated to a degree sufficient to preserve them.

¹United States Fish Commission Bulletin for 1898, pages 26 to 31.

RICE, CLEANING AND POLISHING

RICE, CLEANING AND POLISHING.

By H. McK. FULGHAM.

At the census of 1905 reports were received from 74 establishments engaged in cleaning and polishing rice during the calendar year 1904. These establishments were located in 8 states. The statistics for 3 of these states—California, North Carolina, and Oregon—can not be published separately, however, without disclosing the operations of individual establishments;

therefore, in the tables showing statistics by states, the totals for these states are grouped under the heading "all other states."

Table 1 is a comparative summary of the statistics of rice cleaning and polishing as returned at the censuses from 1880 to 1905, with the per cent of increase or decrease for each census period.

TABLE 1.—COMPARATIVE SUMMARY, WITH PER CENT OF INCREASE: 1880 TO 1905.

	CENSUS.				PER CENT OF INCREASE.		
	1905 ¹	1900	1890	1880	1900 to 1905	1890 to 1900	1880 to 1890
Number of establishments.....	74	80	32	22	* 7.1	150.0	45.5
Capital.....	\$8,821,000	\$2,001,352	\$2,073,884	\$562,200	239.1	25.4	268.9
Salaried officials, clerks, etc., number.....	436	169	* 96	(*)	158.0	76.0	.....
Salaries.....	\$548,562	\$182,033	* \$90,160	(*)	201.4	80.3	.....
Wage-earners, average number.....	1,492	651	647	510	126.2	0.6	25.4
Total wages.....	\$640,632	\$265,585	\$223,433	\$110,467	141.2	18.9	102.3
Men 16 years and over.....	1,487	630	630	376	132.7	1.4	67.6
Wages.....	\$639,093	\$262,042	\$221,360	(*)	144.2	18.4	.....
Women 16 years and over.....	1	.....	9	94	.....	.....	* 90.4
Wages.....	\$239	.....	\$1,323	(*)	.....	.....	.....
Children under 16 years.....	4	12	8	46	* 66.7	50.0	* 82.6
Wages.....	\$400	\$3,543	\$750	(*)	* 88.7	372.4	.....
Miscellaneous expenses.....	\$615,583	\$230,203	\$147,092	(*)	167.4	55.6	.....
Cost of materials used.....	\$13,315,065	\$7,575,522	\$5,001,206	\$2,866,407	75.8	35.2	110.1
Value of products.....	\$16,296,916	\$8,723,726	\$6,693,196	\$3,133,324	86.8	30.3	113.6

¹Exclusive of the statistics of 2 establishments cleaning rice, engaged primarily in flour and grist milling, that reported clean rice and rice by-products, valued at \$107,693.

* Decrease.

* Includes proprietors and firm members, with their salaries; number only reported in 1900 and 1905, but not included in this table.

* Not reported separately.

* Not reported.

The number of establishments increased from 22 in 1880, when rice cleaning and polishing was first reported, to 74 in 1905, an increase of 236.4 per cent; the capital, from \$562,200 to \$8,821,099, an increase of 1,469 per cent; and the value of products, from \$3,133,324 to \$16,296,916, an increase of 420.1 per cent. Because of the abandonment of a number of small custom mills periodically operated for cleaning rice for local use throughout the Southern states, there was a decrease from 80 establishments in 1900 to 74 in 1905. The capital invested increased \$6,219,747, or 239.1 per cent; the number of wage-

earners, 841, or 129.2 per cent; the wages, \$375,047, or 141.2 per cent; and the value of products, \$7,573,190, or 86.8 per cent.

With regard to the manner of obtaining rough rice for cleaning and polishing, the mills have been divided into three classes: Merchant mills, which purchase the product from the farmer as it comes from the field; custom mills, which accept the rough rice from the farmer to be cleaned on a toll basis; and merchant and custom mills, which both purchase and clean for toll.

Table 2 shows, by states, the number of mills engaged in merchant milling exclusively, the number

engaged in custom milling exclusively, and the number doing both merchant and custom milling, together with the value of toll received, as reported at the census of 1905.

TABLE 2.—Number of mills, by class, and value of toll received, by states: 1905.

STATE.	MILLS.				Value of toll received.
	Total.	Mer- chant.	Custom.	Merchant and custom.	
United States.....	74	12	31	31	\$1,580,337
Georgia.....	3	.....	3	.....	22,305
Louisiana.....	43	5	17	21	903,325
South Carolina.....	4	.....	4	.....	76,885
Texas.....	17	1	6	10	516,637
Washington.....	4	.....	.....	.....	.....
All other states ¹	3	2	1	.....	1,125

¹ Includes California, North Carolina, and Oregon.

The number of merchant mills reported for the United States is 12; the number of custom mills, 31; and the number of mills engaged in both merchant and custom milling, 31. The last named class, while partaking of the nature of both the others in its relations to the rice planter, milled the larger part of its output on the toll basis, and, in reality, is made up mainly of custom mills.

The total toll receipts for the United States were \$1,580,337, an amount equal to about one-tenth the total value of cleaned rice and rice products for the year.

Table 3 shows by states, for 1905, the quantity and cost of the foreign and domestic rough rice milled, the average quantity milled per establishment, the percentage of the total milled in each state, and the kind, quantity, and value of the product.

TABLE 3.—ROUGH RICE MILLED AND RICE PRODUCTS, BY STATES: 1905.

	United States.	Georgia.	Louisiana.	South Carolina.	Texas.	Washington.	All other states. ¹
Number of establishments.....	74	3	43	4	17	4	2
Rough rice:							
Total.....							
Pounds.....	999,727,650	11,684,475	635,010,885	28,552,860	316,170,405	788,985	7,520,040
Cost.....	\$12,631,132	\$135,154	\$8,494,483	\$481,401	\$3,339,534	\$31,580	\$145,980
Domestic—							
Pounds.....	990,473,625	11,684,475	635,010,885	28,552,860	311,895,405	.....	3,330,000
Cost.....	\$12,471,402	\$135,154	\$8,494,483	\$481,401	\$3,294,534	.....	\$63,500
Foreign—							
Pounds.....	9,254,025	.....	.....	.....	4,275,000	788,985	4,190,040
Cost.....	\$159,730	.....	.....	.....	\$45,000	\$31,580	\$83,150
Average consumption per establishment, pounds.....	13,509,833	3,894,825	14,767,605	7,138,215	18,598,259	197,246	2,506,680
Per cent of total pounds milled.....	100.0	1.2	63.5	2.8	31.6	0.1	0.8
Rice products, aggregate value.....	\$16,242,333	\$172,429	\$10,665,197	\$554,508	\$4,638,567	\$40,300	\$171,032
Clean rice:							
Total.....							
Pounds.....	623,900,245	7,026,894	394,744,386	17,825,732	197,433,320	713,913	6,156,090
Value.....	\$15,357,133	\$161,324	\$10,110,144	\$527,686	\$4,352,058	\$40,155	\$165,766
Whole—							
Pounds.....	411,208,943	3,673,394	287,460,640	13,677,357	102,812,539	713,713	2,871,000
Value.....	\$12,077,124	\$110,912	\$8,520,090	\$447,721	\$2,851,807	\$40,153	\$106,441
Broken—							
Pounds.....	212,691,302	3,353,500	107,283,746	4,148,375	94,620,481	200	3,285,090
Value.....	\$3,280,009	\$50,412	\$1,590,054	\$79,965	\$1,500,251	\$2	\$59,325
Polish:							
Pounds.....	33,290,331	411,491	22,526,750	701,260	9,500,830	.....	150,000
Value.....	\$267,647	\$3,146	\$178,608	\$6,915	\$77,578	.....	\$1,400
Bran:							
Pounds.....	120,694,130	1,390,446	74,531,334	3,151,557	40,772,421	69,372	779,000
Value.....	\$501,193	\$5,729	\$303,886	\$18,460	\$169,647	\$145	\$3,326
Hulls and waste:							
Pounds.....	221,842,944	2,855,644	143,208,415	6,874,311	68,463,834	5,700	435,040
Value.....	\$116,360	\$2,230	\$72,559	\$1,447	\$39,584	.....	\$540

¹ Includes establishments distributed as follows: California, 1; North Carolina, 1; Oregon, 1.

The rough rice milled consisted of 990,473,625 pounds of domestic rice, valued at \$12,471,402, and 9,254,025 pounds of foreign, imported from the Orient and Honduras and valued at \$159,730—a total of 999,727,650 pounds, valued at \$12,631,132. From this amount 623,900,245 pounds of clean rice, valued at \$15,357,133, and 375,827,405 pounds of by-products, valued at \$885,200, were obtained. The by-products consisted of 33,290,331 pounds of polish, valued at \$267,647; 120,694,130 pounds of bran, valued at \$501,193; and 221,842,944 pounds of hulls and waste, valued at \$116,360. The value of hulls and waste here given represents only the value of the product sold, as no account has been taken of that used for fuel at the mills.

The average quantity of rough rice milled per establishment in the United States during the year was

13,509,833 pounds. The highest average, 18,598,259 pounds, was for Texas, and the lowest, 197,246 pounds, for Washington.

Of all the rice cleaned in the United States, the greatest proportion, 63.5 per cent, was milled in Louisiana, and the smallest proportion, one-tenth of 1 per cent, in Washington. Louisiana and Texas combined milled 95.1 per cent of the total.

The value of products given in this table does not include the value of "all other products," under which designation are comprised products other than rice and rice by-products, valued at \$54,583. The value of this group is shown in the general summary table.

Table 4 shows, by states, the percentage that each class of rice products formed of the total quantity and the total value in 1905.

TABLE 4.—RICE PRODUCTS—PER CENT DISTRIBUTION BY QUANTITY AND VALUE, BY STATES: 1905.

STATE.	CLEAN RICE.						POLISH.		BRAN.		HULLS AND WASTE.	
	Total.		Whole.		Broken.							
	Quan- tity.	Value.	Quan- tity.	Value.	Quan- tity.	Value.	Quan- tity.	Value.	Quan- tity.	Value.	Quan- tity.	Value.
United States.....	62.4	94.6	41.1	74.4	21.3	20.2	3.3	1.6	12.1	3.1	22.2	0.7
Georgia.....	60.1	93.6	31.4	64.3	28.7	29.3	3.5	1.8	11.9	3.3	24.5	1.3
Louisiana.....	62.2	94.8	45.3	79.9	16.9	14.9	3.5	1.7	11.7	2.8	22.6	0.7
South Carolina.....	62.4	95.2	47.9	80.8	14.5	14.4	2.5	1.2	11.0	3.3	24.1	0.3
Texas.....	62.4	93.8	32.5	61.5	29.9	32.3	3.0	1.7	12.9	3.7	21.7	0.8
Washington.....	90.5	99.6	90.5	99.6	(¹)	(¹)	.....	.....	8.8	0.4	0.7	.....
All other states ²	81.9	96.9	38.2	62.2	43.7	34.7	2.0	0.8	10.3	2.0	5.8	0.3

¹ Less than one-tenth of 1 per cent.² Includes California, North Carolina, and Oregon.

For each of the several states the proportion of the yield and the proportion of the value of cleaned rice and each of the rice by-products varied but little from the corresponding proportion for the United States, except in the Pacific Coast states, where imported rice is received in a partially cleaned condition. This accounts for the large yield of clean rice and the small

yield of polish, bran, and hulls shown for Washington and under the heading "all other states," which includes California and Oregon.

Table 5 presents the exports of domestic rice, and of rice bran, meal, and polish, and the imports of rice, and of rice flour, rice meal, and broken rice for the years ending June 30, from 1891 to 1905.

TABLE 5.—EXPORTS AND IMPORTS OF RICE AND RICE PRODUCTS: 1891 TO 1905.¹

YEAR. ²	EXPORTS.						IMPORTS.					
	Total.		Rice.		Rice bran, meal, and polish.		Total.		Rice.		Rice flour, meal, and broken rice.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
1905.....	204,105,067	\$5,333,090	165,689,272	\$5,066,199	38,415,795	\$266,891	109,254,598	\$2,095,380	46,179,592	\$1,181,513	63,075,006	\$913,867
1904.....	197,105,073	\$2,757,997	170,363,728	\$2,557,734	26,741,345	200,263	154,263,045	\$3,075,091	75,363,068	\$1,870,948	78,900,577	\$1,204,143
1903.....	82,643,860	\$2,607,074	63,325,013	\$2,384,485	19,218,356	122,589	169,891,214	\$3,071,091	78,552,240	\$1,742,456	91,338,974	\$1,329,235
1902.....	80,112,024	\$2,000,782	51,135,786	\$1,832,772	28,976,238	228,010	157,999,404	\$2,942,268	76,015,375	\$1,611,557	81,984,118	\$1,330,711
1901.....	63,999,726	\$1,600,897	39,550,838	\$1,410,975	24,445,888	143,922	117,199,710	2,324,898	74,598,001	1,588,044	42,601,049	736,854
1900.....	41,066,417	667,387	12,947,009	500,364	28,119,408	167,023	116,679,891	2,279,036	93,648,451	1,904,915	23,031,440	874,121
1899.....	15,334,689	118,809	852,704	35,511	14,481,985	80,298	3,930,149	153,837,025	3,152,771	50,340,267	777,378	
1898.....	6,200,987	62,999	637,146	27,501	5,563,841	35,498	190,285,315	3,746,833	129,810,630	2,793,111	60,474,685	953,722
1897.....	3,905,754	34,730	387,288	14,617	3,518,468	20,113	197,810,134	3,517,160	133,939,930	2,555,960	63,876,204	961,200
1896.....	15,031,554	93,754	1,340,876	14,117	13,684,678	79,637	146,724,607	2,185,579	78,190,334	1,274,574	68,534,273	911,005
1895.....	1,623,336	16,454	124,296	4,687	1,499,040	11,767	219,564,320	3,445,512	141,301,411	2,353,974	78,262,909	1,091,538
1894.....	10,760,249	112,130	763,425	19,884	10,002,824	92,255	142,161,817	2,874,835	80,810,536	1,540,992	55,351,281	833,843
1893.....	13,711,798	153,334	756,992	25,126	12,954,806	128,208	147,483,828	2,760,161	81,031,944	1,598,625	60,461,884	1,191,526
1892.....	10,256,796	89,840	(³)	(³)	10,256,796	89,340	148,103,688	3,050,883	85,112,164	1,933,447	62,091,324	1,097,456
1891.....	3,490,895	59,714	540,620	33,012	2,950,275	26,702	214,363,582	4,559,540	133,104,003	3,170,132	81,259,519	1,389,408

¹ "Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor.² Year ending June 30.³ Includes shipments to Porto Rico and Hawaii.⁴ Includes shipments received from Hawaii.⁵ Includes 896,000 pounds damaged.⁶ Rice included with rice bran, meal, and polish.

The total quantity and value of exports increased from 3,490,895 pounds, valued at \$59,714, in 1891, to 204,105,067 pounds, valued at \$5,333,090, in 1905. During the same period the imports decreased from 214,363,582 pounds, valued at \$4,559,540, to 109,254,598 pounds, valued at \$2,095,380—decreases of 49 per cent in quantity and 54 per cent in value. In 1891 the total quantity of exports equaled only 1.6 per cent of the total quantity of imports. The relation, however, changed to such an extent that in 1905 the quantity of exports equaled 186.8 per cent of the quantity of imports.

Prior to 1900 the exports of rice consisted principally of rice bran, meal, and polish, but since that year the value of the clean rice exported has greatly exceeded that of the by-products. This is due largely to the great increase in the production of rice in Louisiana and Texas, following the introduction of irrigation and the use of improved machinery in the harvesting and thrashing. The consequent saving in

the cost of production has made it possible for the United States to enter the rice market of the world on more nearly equal terms with countries employing cheaper labor. On the other hand, it will be noticed that the imports of clean rice decreased each year from 1900 to 1905, with the exception of the interval between 1902 and 1903, when there was a slight increase, and that since 1891 the general tendency has been to decrease. The imports of rice flour, rice meal, and broken rice have not decreased greatly since 1891, notwithstanding the great increase in home production. The constant growing demand for "brewers' rice" is probably the cause of this condition.

Tables 6 and 7 show, by countries, the exports and imports of rice and rice by-products for each of the five years from 1901 to 1905. The totals in these tables do not agree with those in Table 5, because the foreign exports and imports of rice at Porto Rico and Hawaii have usually been excluded from Table 5.

TABLE 6.—EXPORTS OF DOMESTIC RICE AND RICE PRODUCTS, BY COUNTRIES: YEARS ENDING JUNE 30, 1901 TO 1905.¹

COUNTRY.	1905		1904		1903		1902		1901	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Aggregate.....	204,105,067	\$5,333,000	97,105,073	\$2,757,997	82,543,369	\$2,507,074	80,112,024	\$2,060,782	63,999,726	\$1,560,897
Clean rice:										
Total.....	165,689,272	5,066,199	70,363,728	2,557,734	63,325,013	2,384,485	51,135,786	1,832,772	39,550,838	1,416,975
EUROPE.										
Austria-Hungary.....			1,002	49						
Azores, and Madeira Islands.....			700	35					200	10
Belgium.....	421,969	15,549	16,721	972			15,156	947		
Denmark.....	67,825	2,925								
France.....	10,844	543	39,611	2,222	30,241	2,146	41,972	2,804	11,599	782
Germany.....	7,071,701	250,836	2,021	122	2,826	151	66,959	1,656	283,513	13,408
Netherlands.....	10,761,280	372,047								
Sweden and Norway.....									1,650	109
United Kingdom.....	9,813,717	317,464	612,492	31,018	324,241	17,842	288,216	16,172	290,377	13,100
NORTH AMERICA.										
Bermuda.....	2,388	148	983	68			2,176	112	1,870	136
British Honduras.....	253,980	7,177	26,359	911	4,220	158	1,246	53	4,600	120
Dominion of Canada:										
Nova Scotia, New Brunswick, etc.....	300	18	130	5			345	19		
Quebec, Ontario, Manitoba, etc.....	532,950	14,785	194,371	7,039	43,837	2,008	5,505	297	17,509	901
British Columbia.....	10,608	323	16,320	625	5,700	240	960	53		
Newfoundland and Labrador.....	200	6							320	20
Central American states:										
Costa Rica.....	505,590	15,399	5,100	168	7,520	202			12,800	401
Guatemala.....	527,744	12,722	38,790	1,185	20,371	629	17,982	570	22,056	854
Honduras.....	533,090	15,416	100,320	3,675	34,367	1,109	14,949	631	24,451	784
Nicaragua.....	705,617	22,711	107,746	4,158	29,598	935	26,316	843	132,195	3,824
Panama.....	2,095,019	62,630	28,573	882						
Salvador.....	11,500	270								
Mexico.....	2,844,437	67,359	444,188	12,790	16,074	979	105,718	4,253	81,538	2,600
Miquelon, Langley, etc.....							1,800	72		
West Indies:										
British.....	1,438	70	1,061	59	2,480	134	2,618	125	1,200	63
Cuba.....	37,906,368	1,053,690	698,983	19,985	850	35	7,206	364	31,015	1,003
Dutch.....			452	18			235	14		
French.....			400	20			300	18	367	20
Haiti.....	4,374	238			100	5	800	45	1,267	78
Santo Domingo.....							2,040	107	448	26
SOUTH AMERICA.										
Brazil.....			3,960	195	1,000	50			1,600	70
Chile.....	1,000	50			500	13	1,914	62		
Colombia.....	244,091	7,844	11,653	635	1,703	68	6,407	287	8,907	417
Ecuador.....	41,800	878								
Guiana—French.....									2,156	68
Peru.....	3,000	137	5,082	241			2,000	110		
Venezuela.....	154,147	3,454					236	13		
ASIA.										
China—Russian.....			10,000	600						
East Indies—Dutch.....							180	5		
Hongkong.....	1,000	30	100	5			200	10		
Japan.....			4,500	180						
Russia—Asiatic.....	290,000	7,835	11,560	457	2,300	109				
OCEANIA.										
British Australasia.....	700	38	1,340	83	610	42			2,300	150
All other British Oceania.....	160	4	640	32	100	6	1,500	65		
French Oceania.....	6,500	146	200	9	200	10			85,460	2,727
German Oceania.....	15,637	654	50	2	2,837	152				
Guam.....									20,000	595
Tonga, Samoa, and all other.....									28,800	489
AFRICA.										
British Africa:										
West.....	25,000	1,000							100	7
South.....	1,000	50			357	25				
Liberia.....									1,000	45
Shipments to Hawaii.....	9,983,491	303,029	3,642,925	143,142	2,209,920	102,008	(?)	(?)	(?)	(?)
Shipments to Porto Rico.....	80,838,516	2,508,724	64,340,385	2,320,127	60,583,001	2,255,429	50,520,750	1,803,065	38,471,880	1,374,168
Rice bran, meal, and polish:										
Total.....	38,415,795	266,891	26,741,345	200,263	19,218,356	122,589	28,976,238	228,010	24,448,888	143,922
EUROPE.										
Belgium.....	874,750	6,784			20,000	120				
Denmark.....							750	10		
Germany.....	35,834,304	246,610	21,237,016	158,493	16,572,090	101,389	24,771,373	194,442	21,102,408	118,280
Netherlands.....	1,406,675	11,162	4,034,091	37,747	2,492,758	20,491	4,194,235	39,480	1,430,240	10,350
United Kingdom.....	211,890	1,630	560,873	3,955	99,568	400			1,879,000	15,100
NORTH AMERICA.										
British Honduras.....	141	1	3,120	24	3,940	24	9,830	73	34,240	170
Central American states:										
Costa Rica.....	187	2								
Honduras.....	3,166	25								
Nicaragua.....	5,092	39							1,000	8
Mexico.....	3,500	35					50	5		
West Indies—Cuba.....	76,000	613							2,000	14
SOUTH AMERICA.										
Venezuela.....			4,445	44						
AFRICA.										
British Africa—South.....					30,000	165				

¹ "Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor.² Not given.

RICE, CLEANING AND POLISHING.

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TABLE 7.—IMPORTS OF RICE AND RICE PRODUCTS, BY COUNTRIES: YEARS ENDING JUNE 30, 1901 TO 1905.¹

COUNTRY.	1905		1904		1903		1902		1901	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Aggregate.....	109,254,598	\$2,095,380	154,263,645	\$3,075,091	169,891,214	\$3,071,601	157,999,494	\$2,942,268	117,199,710	\$2,324,898
Clean rice:										
Total.....	46,179,592	1,181,513	75,363,068	1,870,948	78,552,240	1,742,456	76,015,376	1,611,557	74,598,061	1,588,044
EUROPE.										
Austria-Hungary.....	360,000	4,913	2,288,130	32,366	4,051,178	58,522	1,502,400	22,583	.....	.....
Denmark.....	.....	.....	.....	.....	.....	.....	.....	.....	55,115	1,037
France.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Germany.....	466,333	9,765	4,103,696	87,004	7,692,179	159,327	7,831,891	100,404	10,324,218	216,681
Greece.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Italy.....	1,652,841	53,253	2,767,779	93,186	2,235,577	77,404	1,777,983	53,427	1,999,845	59,944
Netherlands.....	145,400	2,097	2,553,582	55,982	2,263,900	61,097	952,171	21,067	1,029,544	26,884
Spain.....	268,794	7,047	1,123,862	36,525	1,923,626	55,122	3,075,655	74,613	.....	.....
Turkey in Europe.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
United Kingdom.....	5,102,991	117,510	7,556,859	174,255	6,335,724	148,299	8,856,464	201,203	6,616,070	152,550
NORTH AMERICA.										
Dominion of Canada:										
Nova Scotia, New Brunswick, etc.	200	6	665	13	100	3	225	7	.....	.....
Quebec, Ontario, Manitoba, etc.	31,504	2,680	16,613	1,654	18,429	1,654	2,415	71	517	17
British Columbia.....	30,650	1,223	3,398	140	258,772	7,209	221,275	5,480	64,245	1,580
Central American states:										
Guatemala.....	.....	.....	13,242	392	30,955	305	9,867	173	18,621	372
Honduras.....	2,500	63	.....	.....	.....	.....	.....	.....	.....	.....
Mexico.....	315,921	8,802	937,384	25,109	1,924,826	54,625	1,438,738	53,768	759,673	20,311
West Indies:										
British.....	.....	.....	280	11	.....	.....	.....	.....	.....	.....
Cuba.....	50,523	1,153	119,004	3,133	56,744	2,140	598	13	2,250	63
SOUTH AMERICA.										
Argentina.....	.....	.....	.....	.....	310	6	.....	.....	.....	.....
Brazil.....	.....	.....	.....	.....	80	5	.....	.....	.....	.....
Chile.....	.....	.....	.....	.....	.....	.....	.....	.....	232,030	4,600
Peru.....	.....	.....	.....	.....	.....	.....	.....	.....	150	4
ASIA.										
Chinese Empire.....	18,454,156	507,293	22,016,495	621,576	22,849,154	471,528	23,315,991	445,744	22,721,051	484,205
East Indies:										
British.....	.....	.....	100	2	.....	.....	11,685	168	2,718,084	50,860
Dutch.....	.....	.....	.....	.....	6,737	90	.....	.....	.....	.....
Hongkong.....	3,342,161	73,186	4,042,610	81,593	5,034,986	89,390	4,196,076	73,929	5,153,636	102,581
Japan.....	12,668,790	298,153	27,722,106	655,497	23,629,631	545,292	22,351,342	452,587	22,905,788	466,339
Siam.....	515,230	9,431	.....	.....	.....	.....	.....	.....	.....	.....
Turkey in Asia.....	204	7	.....	.....	.....	.....	.....	.....	.....	.....
All other Asia.....	.....	.....	56,044	839	.....	.....	.....	.....	.....	.....
Shipments from Hawaii.....	2,771,083	84,414	39,911	1,610	234,930	10,218	340,600	15,347	.....	.....
Rice flour, meal, and broken rice:										
Total.....	63,075,006	913,867	78,900,577	1,204,143	91,338,974	1,329,235	81,984,118	1,330,711	42,601,649	736,854
EUROPE.										
Austria-Hungary.....	10,728,462	164,905	13,401,642	199,721	9,179,368	137,429	6,100,560	90,688	492,000	7,256
France.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Germany.....	33,541,708	472,388	39,851,166	627,874	64,406,247	941,411	66,492,940	1,085,120	36,546,212	632,702
Italy.....	756,717	9,719	.....	.....	.....	.....	.....	.....	.....	.....
Netherlands.....	2,768,410	43,424	5,585,829	90,051	6,591,912	99,148	728,000	11,292	224,000	3,772
Portugal.....	.....	.....	550	5	.....	.....	.....	.....	.....	.....
United Kingdom.....	10,124,874	153,623	10,534,740	157,201	4,583,746	68,150	5,541,005	90,258	4,362,409	75,819
NORTH AMERICA.										
Dominion of Canada:										
Quebec, Ontario, Manitoba, etc.	1,318,770	13,172	3,341,520	33,971	3,449,283	37,198	.....	.....	750	11
British Columbia.....	506,052	9,539	.....	.....	1,337	16	.....	.....	.....	.....
ASIA.										
Chinese Empire.....	427,724	5,954	498,183	7,377	94,455	1,330	141,786	2,030	285,143	4,835
East Indies:										
British.....	1,121,787	12,251	1,306,101	18,057	1,840,065	26,645	224,145	2,374	.....	.....
Hongkong.....	614,016	8,245	274,334	3,924	427,013	5,866	231,879	3,451	287,687	4,297
Japan.....	660,196	11,376	237,338	5,685	544,672	8,738	2,523,517	45,465	403,130	8,092
Siam.....	506,070	9,263	.....	.....	.....	.....	.....	.....	.....	.....
All other Asia.....	.....	.....	3,868,547	60,133	220,478	3,267	.....	.....	.....	.....
Shipments from Hawaii.....	.....	.....	1,962	51	.....	.....	.....	.....	.....	.....

¹ "Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor.

Of the quantity of clean rice exported during the year ending June 30, 1905, Germany, the Netherlands, and the United Kingdom received 16.7 per cent and Cuba and Porto Rico 71.7 per cent. Of the total quantity of the by-products, 93.3 per cent went to Germany. The large yield for that year, coupled with the low price existing in the United States, enabled

this country to compete with long established rice producing countries.

Table 8 shows the exports of domestic clean rice by customs districts, quinquennially, from 1885 to 1905. In this table only the exports to foreign countries are included, shipments to Porto Rico and Hawaii not being presented for 1905.

TABLE 8.—EXPORTS OF DOMESTIC CLEAN RICE, BY CUSTOMS DISTRICTS, QUINQUENNIALLY: YEARS ENDING JUNE 30, 1885 TO 1905.¹

CUSTOMS DISTRICT.	1905*		1900		1895		1890		1885	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Total.....	74,866,965	\$2,254,446	12,947,009	\$500,364	124,296	\$4,687	388,914	\$20,728	168,827	\$10,619
ATLANTIC COAST.										
Baltimore, Md.....			28,425	1,063	16,895	676	92,789	3,836	2,614	128
Bangor, Me.....	665	33	589	38						
Bath, Me.....			6,000	300						
Boston and Charlestown, Mass.....							974	65		
Brunswick, Ga.....	115	6								
Charleston, S. C.....	500	25	2,700	145			2,955	173	27,057	1,719
New London, Conn.....							600	30		
Newport News, Va.....	71,061	2,842								
New York, N. Y.....	3,126,039	108,036	5,100,633	168,143	3,283	141	223,595	13,823	100,306	6,651
Philadelphia, Pa.....	10,866	272					250	20		
Portland and Falmouth, Me.....	400	22								
Passamaquoddy, Me.....							125	10		
St. Johns, Fla.....	100	2								
Savannah, Ga.....	3,244	125	14,534	760						
GULF COAST.										
Galveston, Tex.....	14,120,873	536,869	155,200	3,134						
Key West, Fla.....	80	4	236	9	212	11	200	11		
Mobile, Ala.....	5,515,175	114,750	5,382	192			483	23		
New Orleans, La.....	48,328,167	1,397,921	662,406	24,662	97,288	3,516	53,771	1,999	19,738	923
Pearl River, Miss.....					1,063	38				
Pensacola, Fla.....	1,000	65								
MEXICAN BORDER.										
Arizona.....	73,208	4,533								
Brazos de Santiago, Tex.....	195,393	4,805	76,787	2,015			1,750	55		
Corpus Christi, Tex.....	844,165	15,332	1,165	46			2,200	157	1,117	90
Paso del Norte, Tex.....	640,481	16,112	26,642	2,108						
Saluria, Tex.....	513,364	15,529	42,529	898	665	48			5,376	340
PACIFIC COAST.										
Alaska.....	20,080	954	8,722	777						
Hawaii.....	3,100	104								
Puget Sound, Wash.....	3,448	132	15,560	480					2,485	135
San Diego, Cal.....							6,429	385		
San Francisco, Cal.....	882,936	22,077	6,792,085	288,199						
CANADIAN BORDER.										
Champlain, N. Y.....			2,616	130						
Detroit, Mich.....	262,800	5,549								
Huron, Mich.....	193,140	5,728	1,860	93						
Oswegatchie, N. Y.....			280	10	650	45				
Vermont, Vt.....	56,565	2,539	2,668	156						
Minnesota, Minn.....							1,604	88	10,134	633
Montana and Idaho.....					4,240	212				
Superior, Mich.....							889	53		

¹"Commerce and Navigation of the United States," Bureau of Statistics, Department of Commerce and Labor.

*Not including 80,838,816 pounds, valued at \$2,508,724, shipped to Porto Rico, and 9,983,491 pounds, valued at \$303,029, shipped to Hawaii.

In 1905 New Orleans ranked first in the quantity and value of the rice exported; Galveston, second; Mobile, third, and New York, fourth. If the shipments to Hawaii and Porto Rico were included, this order would be changed and San Francisco would be third in rank and Mobile and New York fourth and fifth, respectively.

Since 1900 the prominence of several customs districts as rice exporting centers has changed. San Francisco and New York, which stood, respectively, first and second in 1900, were passed by New Orleans, Galveston, and Mobile.

Table 9 is a summary of rice cleaning and polishing for the Hawaiian Islands as reported at the census

of 1900, this summary being reproduced in the absence of later authoritative data.

TABLE 9.—Summary for Hawaii: 1900.

Number of establishments.....	41
Capital.....	\$381,625
Salaries of officials, clerks, etc., number.....	18
Salaries.....	\$12,100
Wage-earners, average number.....	173
Total wages.....	\$49,124
Men 16 years and over.....	171
Wages.....	\$48,800
Children under 16 years.....	2
Wages.....	\$324
Miscellaneous expenses.....	\$23,329
Cost of materials used.....	\$481,025
Value of products, including custom work.....	\$664,300
Pounds of rough rice milled.....	22,089,250
Average number of pounds of rough rice milled per establishment.....	538,762
Pounds of clean rice obtained.....	15,001,020
Number of acres planted in rice in 1899 ¹	9,130
Clean rice produced, pounds ¹	33,442,400
Average production per acre, pounds ¹	3,663

¹As reported to the division of agriculture, Census Office.

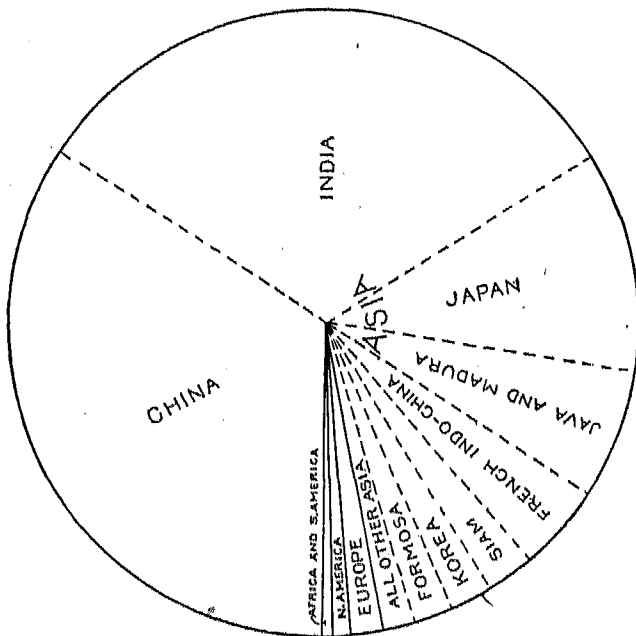
The total production for the Hawaiian Islands, expressed in terms of clean rice, was 33,442,400 pounds. The difference between this and the quantity of clean rice obtained was 18,441,380 pounds, a part of which was retained for seed, while the remainder was cleaned by primitive methods for domestic use.

The production of rice in the Philippine Islands in the crop year 1904-5 is estimated, upon the basis of an investigation made by the Bureau of Agriculture of those islands, to be 19,581,792 bushels, unhulled. This crop was 5,000,000 bushels less than the production of 1902-3, as given by the Philippine Census.

The area planted in rice in 1905 exceeded the area in 1902 by nearly 600,000 acres. The average yield of rice in the Philippine Islands in 1902-3 was 16.7 bushels per acre, while in the United States the average yield was 31.9 bushels in 1904 and 28.1 bushels in 1905.

The quantity of rice imported into the Philippine Islands during the year ending June 30, 1905, was 563,282,346 pounds, cleaned, of which all but one-tenth of 1 per cent came from the southern coast of Asia, chiefly from the French East Indies. The sum of these imports and the crop of 1904-5 is equivalent to about 1,200,000,000 pounds of cleaned rice, which, divided among 7,635,426 persons—the population of the islands in 1903—would give an average consumption of 157 pounds per capita, including seed.¹

Diagram—Production of rice in the world.



Of the world's production of rice for 1904, 66.9 per cent was supplied by India and China and 10.8 per cent by Japan. As indicated in the diagram, about 96 per cent was supplied by Asia.

The annual per capita consumption of rice is about 300 pounds for Japan and 350 pounds for some provinces of India. In the United States about 6 pounds per capita are consumed for edible purposes and 1½ pounds in manufacturing. The per capita consumption, based on the imports and exports during the year 1904, was 7.5 pounds for Germany, 10.8 pounds for France, 11 pounds for the United Kingdom, 15.6 pounds for Belgium, and 44.2 pounds for the Netherlands.

HISTORICAL AND DESCRIPTIVE.

Considered from the standpoint of its general use as a food, and its almost exclusive use by the people of many parts of the Orient, rice is indeed the staff of life. It is also consumed in great quantities in the countries of northern and eastern Africa, the West Indies, Central America, and the Malay archipelago, while the people of all other tropical and semitropical countries class it among their food necessities. In many sections of India and China and in Japan and other countries of Asia, where the merits of rice as a food have long been established, the people are so dependent upon it that a failure of the crop means great suffering to millions and starvation to many. The failure of the rice crop in the district of Behar, India, in 1873, where 15,000,000 people were dependent upon it for subsistence, necessitated the expenditure of \$32,000,000 by the British Government for food for the people of the stricken district. The dire consequences of a great shortage in the rice crop in some of the provinces of Japan were brought to the notice of the people of this country in 1906.

Rice was probably an article of food in Asia in pre-historic times. It is known that the Chinese have used it for nearly fifty centuries, and in India, too, its use antedates authentic history. It was introduced into Europe in the fifteenth century, when it was taken to Italy and Spain from northern Africa, where it had been planted by the Mohammedans in their migration from Asia Minor.

In 1647 Governor Berkeley, of Virginia, planted some seed rice received from England, but the experiment was not a success, and it was not until 1694 that rice growing was really established in this country. In that year the governor of South Carolina planted some rice given him by the master of a trading vessel which had put into Charleston on a cruise from Madagascar. The seed grew well, and in a few years rice planting on the lowlands of the coast became one of the chief industries of South Carolina. From this state the cultivation was extended to North Carolina and Georgia and later to Florida, Alabama, Mississippi, and Louisiana. The French who settled about New Orleans and the Acadians of southwestern Louisiana cultivated rice in a primitive way in the latter half of the eighteenth century, but the methods of growing were so crude that the industry did not become commercially important until after the Civil War.

The conditions resulting from the Civil War gave considerable stimulus to the planting of rice as a staple crop in Louisiana along the Mississippi river, and impoverished planters, who had formerly relied on other crops requiring great outlay of capital, began to grow rice as a means of quick financial relief. For several years the production was small, but it gradually increased. In the decade following 1870 the annual average reached seventy-one million pounds, and in 1880 more than fifty-one million pounds of clean rice

¹ "Crop Reporter," May, 1906, United States Department of Agriculture.

were marketed. A part of this was produced in the extreme eastern part of the now famous rice belt of southwestern Louisiana.

Since 1870 there has been a decline in the production in the Carolinas and Georgia as a result of unfavorable climatic conditions and the fact that improved machinery can not be used on the poorly drained fields.

In 1896 the problem of irrigating the barren prairies of southwestern Louisiana and southeastern Texas was solved at Crowley, in Acadia parish, and a new era in rice culture opened. By means of powerful pumps water is now lifted and forced along elevated ridges through great arterial systems of canals, from which the low-lying fields can be flooded at will. In many cases, also, irrigation is effected by means of artesian wells.

The adoption of modern machinery for cultivating and harvesting the grain quickly followed the introduction of the extensive irrigation systems, since the buoyant prairie soil, which can be easily and thoroughly drained, makes the use of machinery possible. Extensive areas can now be cultivated and harvested with a small expenditure of labor and with economical production and larger profits insured.

The development of the industry in the coastal prairie belt of Louisiana and Texas, where a few years ago land could be obtained at from \$1 to \$5 an acre, has been so great that the commercial crop for this district in 1904, as reported at the census of 1905, was more than 95 per cent of the whole crop for the United States.

In the Atlantic states the grain is cut by the sickle, cured, and thrashed in a stationary thrashing machine, which prepares the grain for milling. In Louisiana and Texas the rice is harvested and thrashed in the same manner as wheat in the Western states. As it comes from the thrasher it is packed in 4-bushel sacks.

The milling of rice consists in reducing the rough rice, or paddy, as it is sometimes called, to an edible state by the removal of the outer shell, which is commercially referred to as "hulls," and the inner cuticle, which is known as "bran," and by a finishing process that removes the "polish" from the kernel and gives it a pearly luster.

The polished rice is graded according to the perfection of the grains, which depends upon the variety of the rice, the care used in the harvesting and in thrashing, and the efficiency in milling. In 1905 the proportion of rice broken in milling was 23.2 per cent in South Carolina, 27.2 per cent in Louisiana, and 47.9 per cent in Texas.

In milling the crop of 1904, the breakage of the grains resulted in a loss of more than \$2,985,000 to the rice planters of the United States, if the broken rice be given the same value as whole or head rice.

But for the fact that the crop of 1904 sold at very low prices, the differential in the prices of the two grades—whole and broken—being small, the loss, possibly, would have been more than \$4,000,000.

In the Atlantic states rice is usually packed for market in barrels; in Louisiana and Texas it is automatically weighed and sacked in "pockets" containing 100 pounds. When exported the pocket is inclosed in another sack as a protection against leakage.

The usual quotations of rice are on the four grades—head, straights, screenings, and No. 2. "Head" is the whole grain; "straights," the better grade of broken grain; "screenings," the badly broken grain; and "No. 2," the lowest grade of broken grain.

In New Orleans the board of trade recognizes the following grades: Extra fancy, fancy, fair, ordinary, screenings, common, inferior, and No. 2. Extra fancy to fair, inclusive, are grades of whole rice and the others are grades of broken rice.

In the United States only head and the highest grade of broken rice are used as a table food, although the breaking of a grain into small pieces in no way diminishes its palatability or nutritive value. A large part of the lower grade is being shipped to Cuba and Porto Rico, where it successfully competes with the cheaper rice from other countries. Practically all of the lowest grade produced in this country is used in breweries, and, in addition, it is necessary to import quantities of such rice to meet their requirements.

In the economic development of the rice milling industry the by-products are being utilized more and more for useful purposes. As feed for horses and cattle, polish, or flour, which is worth from \$15 to \$20 per ton, has few equals because of the high percentage of protein it contains.

Bran, the principal by-product from the standpoint of value, is worth from \$7 to \$10 per ton and is used principally as a feed for cattle and horses. The pure bran is very generally mixed with hulls, which adulteration reduces its value proportionately, and is sold as rice bran. As a feed its value depends upon the percentage of pure bran contained in it, the hulls being practically worthless for feeding purposes.

In the cities and large manufacturing towns hulls are used for many purposes, such as in packing crockery and fragile wares for shipment, and as a substitute for sawdust in packing ice. They are very generally used as a fuel in the engines of the rice mills.

It is estimated that in the United States twenty-one million acres are available for rice planting. If this acreage were planted in rice and an average yield of 29 bushels per acre obtained, this country would take third rank among the rice producing countries of the world.

Table 10 gives, by states, the detailed statistics of the rice cleaning and polishing industry in the United States.

TABLE 10.—RICE, CLEANING AND POLISHING—DETAILED SUMMARY, BY STATES: 1905.

	United States.	Georgia.	Louisiana.	South Carolina.	Texas.	Washington.	All other states. ¹
Number of establishments.....	74	3	43	4	17	4	3
Capital:							
Total.....	\$8,821,099	\$146,954	\$6,138,228	\$317,394	\$2,138,723	\$15,250	\$64,550
Land.....	\$646,883	\$5,030	\$421,005	\$68,650	\$132,108	.....	\$20,000
Buildings.....	\$1,730,052	\$15,100	\$1,141,232	\$89,000	\$485,720	.....	\$8,000
Machinery, tools, and implements.....	\$2,340,019	\$37,190	\$1,666,692	\$57,000	\$558,887	\$4,200	\$16,050
Cash and sundries.....	\$4,005,145	\$89,634	\$2,900,299	\$102,744	\$901,018	\$11,050	\$20,500
Proprietors and firm members.....	33	1	12	3	6	10	1
Salaries of officials, clerks, etc.:							
Total number.....	436	6	232	19	171	.....	8
Total salaries.....	\$548,502	\$7,400	\$288,488	\$19,400	\$224,954	.....	\$3,320
Officers of corporations—							
Number.....	70	.....	40	4	24	.....	2
Salaries.....	\$151,933	.....	\$83,523	\$6,560	\$60,050	.....	\$1,800
General superintendents, managers, clerks, etc.—							
Total number.....	366	6	102	15	147	.....	6
Total salaries.....	\$300,020	\$7,400	\$204,905	\$12,840	\$164,904	.....	\$6,520
Men—							
Number.....	356	6	186	15	144	.....	5
Salaries.....	\$301,789	\$7,400	\$201,925	\$12,840	\$163,404	.....	\$6,220
Women—							
Number.....	10	.....	6	.....	3	.....	1
Salaries.....	\$4,840	.....	\$3,040	.....	\$1,500	.....	\$300
Wage-earners, including pieceworkers, and total wages:							
Greatest number employed at any one time during the year.....	2,728	44	1,644	177	837	7	19
Least number employed at any one time during the year.....	1,180	11	801	35	319	7	7
Average number.....	1,492	28	923	92	432	6	11
Total wages.....	\$640,632	\$7,350	\$400,023	\$14,940	\$211,710	\$2,540	\$4,000
Men 16 years and over—							
Average number.....	1,487	28	923	88	431	6	11
Wages.....	\$639,993	\$7,350	\$400,023	\$14,540	\$211,471	\$2,540	\$4,000
Women 16 years and over—							
Average number.....	1	.....	.....	.....	1	.....	.....
Wages.....	\$230	.....	.....	.....	\$230	.....	.....
Children under 16 years—							
Average number.....	4	.....	.....	4	.....	.....	.....
Wages.....	\$400	.....	.....	\$400	.....	.....	.....
Average number of wage-earners, including pieceworkers, employed during each month:							
Men 16 years and over—							
January.....	1,938	35	1,108	72	644	5	14
February.....	1,842	35	1,148	87	540	7	16
March.....	1,650	15	1,009	87	517	5	17
April.....	1,137	16	667	58	370	7	19
May.....	872	16	502	68	267	6	14
June.....	607	22	351	65	160	7	2
July.....	498	21	342	35	91	7	2
August.....	837	22	630	26	162	5	2
September.....	1,770	33	1,149	116	457	7	8
October.....	2,324	48	1,432	162	605	5	12
November.....	2,205	30	1,390	169	683	7	14
December.....	2,074	37	1,282	121	617	5	12
Women 16 years and over—							
January.....	1	.....	.....	.....	1	.....	.....
February.....	1	.....	.....	.....	1	.....	.....
March.....	.....	.....	.....	.....	.....	.....	.....
April.....	.....	.....	.....	.....	.....	.....	.....
May.....	.....	.....	.....	.....	.....	.....	.....
June.....	.....	.....	.....	.....	.....	.....	.....
July.....	.....	.....	.....	.....	.....	.....	.....
August.....	.....	.....	.....	.....	.....	.....	.....
September.....	2	.....	.....	.....	2	.....	.....
October.....	3	.....	.....	.....	3	.....	.....
November.....	3	.....	.....	.....	3	.....	.....
December.....	2	.....	.....	.....	2	.....	.....
Children under 16 years—							
January.....	.....	.....	.....	.....	.....	.....	.....
February.....	.....	.....	.....	.....	.....	.....	.....
March.....	.....	.....	.....	.....	.....	.....	.....
April.....	.....	.....	.....	.....	.....	.....	.....
May.....	.....	.....	.....	.....	.....	.....	.....
June.....	.....	.....	.....	.....	.....	.....	.....
July.....	.....	.....	.....	.....	.....	.....	.....
August.....	0	.....	.....	0	.....	.....	.....
September.....	0	.....	.....	0	.....	.....	.....
October.....	10	.....	.....	10	.....	.....	.....
November.....	10	.....	.....	10	.....	.....	.....
December.....	10	.....	.....	10	.....	.....	.....
Miscellaneous expenses:							
Total.....	\$615,583	\$5,043	\$300,874	\$16,293	\$186,934	\$1,810	\$5,629
Rent of works.....	\$17,030	\$1,600	\$3,120	.....	\$9,510	\$1,090	\$2,040
Taxes, not including internal revenue.....	\$50,481	\$1,430	\$33,717	\$5,791	\$9,039	\$170	\$334
Rent of offices, interest, insurance, and all other sundry expenses not hitherto included.....	\$538,082	\$2,013	\$361,447	\$10,502	\$100,885	\$580	\$2,655
Contract work.....	\$9,000	.....	\$1,500	.....	\$7,500	.....	.....

¹ Includes establishments distributed as follows: California, 1; North Carolina, 1; Oregon, 1.

TABLE 10.—RICE, CLEANING AND POLISHING—DETAILED SUMMARY, BY STATES: 1905—Continued.

	United States.	Georgia.	Louisiana.	South Carolina.	Texas.	Washington.	All other states.
Materials used:							
Aggregate cost.....	\$13,315,065	\$144,648	\$8,973,084	\$504,657	\$3,508,110	\$33,671	\$150,895
Rough rice—							
Total pounds.....	999,727,650	11,684,475	635,010,885	28,552,860	316,170,405	788,985	7,520,040
Total cost.....	\$12,631,132	\$135,154	\$8,494,483	\$481,401	\$3,339,534	\$31,590	\$148,980
Domestic—							
Pounds.....	990,473,625	11,684,475	635,010,885	28,552,860	311,895,405	.....	3,330,000
Cost.....	\$12,471,402	\$135,154	\$8,494,483	\$481,401	\$3,294,534	.....	\$95,830
Foreign—							
Pounds.....	9,254,025	.....	.....	.....	4,275,000	788,985	4,190,040
Cost.....	\$159,730	.....	.....	.....	\$45,000	\$31,590	\$83,150
Fuel.....	\$116,365	\$1,040	\$76,639	\$4,498	\$33,278	\$310	\$600
Rent of power and heat.....	\$3,173	\$1,100	\$68	.....	.....	\$1,230	\$780
Mill supplies.....	\$88,969	\$1,454	\$67,147	\$2,430	\$16,831	\$512	\$535
All other materials.....	\$393,596	\$5,960	\$252,892	\$16,328	\$118,467	\$39	.....
Freight.....	\$81,890	.....	\$81,890	.....	.....	.....	.....
Products:							
Aggregate value.....	\$16,296,916	\$172,429	\$10,718,311	\$554,575	\$4,640,269	\$40,300	\$171,032
Clean rice—							
Total pounds.....	623,900,245	7,026,894	394,744,386	17,825,732	197,433,320	713,913	6,156,000
Total value.....	\$15,357,133	\$161,324	\$10,110,144	\$527,686	\$4,362,058	\$40,155	\$165,766
Whole—							
Pounds.....	411,208,943	3,673,394	287,460,640	13,677,357	102,812,839	713,713	2,871,000
Value.....	\$12,077,124	\$110,912	\$8,520,090	\$447,721	\$2,851,807	\$40,153	\$106,441
Broken—							
Pounds.....	212,691,302	3,353,500	107,283,746	4,148,375	94,620,481	200	3,285,000
Value.....	\$3,280,009	\$50,412	\$1,590,054	\$79,965	\$1,500,251	\$2	\$99,325
Polish—							
Pounds.....	33,290,331	411,491	22,526,750	701,260	9,500,830	.....	150,000
Value.....	\$267,647	\$3,146	\$178,608	\$6,915	\$77,578	.....	\$1,400
Bran—							
Pounds.....	120,694,130	1,390,446	74,531,334	3,151,557	40,772,421	69,372	779,000
Value.....	\$501,193	\$5,729	\$303,886	\$18,460	\$169,647	\$145	\$3,326
Hulls and waste—							
Pounds.....	221,842,944	2,855,644	143,208,415	6,874,311	68,403,834	5,700	435,040
Value.....	\$116,360	\$2,230	\$72,559	\$1,447	\$39,584	.....	\$540
All other products.....	\$54,583	.....	\$53,114	\$67	\$1,402	.....	.....
Power:							
Number of establishments reporting.....	74	3	43	4	17	4	3
Total horsepower.....	16,251	350	10,407	707	4,615	27	145
Owned—							
Engines—							
Steam—							
Number.....	106	2	68	14	21	.....	1
Horsepower.....	15,774	145	10,333	707	4,509	.....	80
Electric motors—							
Number.....	18	5	4	.....	9	.....	.....
Horsepower.....	385	205	74	.....	106	.....	.....
Rented—							
Electric motors—							
Number.....	6	.....	.....	.....	.....	4	2
Horsepower.....	92	.....	.....	.....	.....	27	55

BEET SUGAR

(443)

BEET SUGAR.

By ZACH C. ELKIN.

The manufacture of sugar from beets, while a comparatively new industry in the United States, has been progressing at such a rapid rate within the past few years that not many people, besides those actively engaged in the growing of sugar beets or the manufacture of sugar therefrom, realize the extent to which the industry has increased in all its branches.

Table 1 is a comparative summary of the statistics for the manufacture of beet sugar as reported at the censuses of 1880, 1900, and 1905, with the percentages of increase from 1900 to 1905.

TABLE 1.—Comparative summary, 1905, 1900, and 1880, with per cent of increase from 1900 to 1905.

	CENSUS. ¹			Per cent of increase, 1900 to 1905.
	1905	1900	1880	
Number of establishments.....	51	30	4	70.0
Capital.....	\$55,923,450	\$20,141,719	\$365,000	177.6
Salaries of officials, clerks, etc., number.....	763	350	(²)	118.0
Salaries.....	\$1,004,636	\$356,675	(²)	181.7
Wage-earners, average number.....	3,063	1,070	350	101.2
Total wages.....	\$2,486,702	\$1,092,207	\$62,271	127.7
Men 16 years and over.....	3,928	1,051	350	101.3
Wages.....	\$2,472,032	\$1,085,218	\$62,271	127.8
Women 16 years and over.....	10	4	.....	150.0
Wages.....	\$5,006	\$1,085	.....	202.4
Children under 16 years.....	25	15	.....	66.7
Wages.....	\$0,574	\$5,304	.....	80.5
Miscellaneous expenses.....	\$1,000,555	\$441,384	(³)	353.0
Cost of materials used.....	\$14,486,870	\$4,803,700	\$180,128	201.6
Value of products.....	\$24,393,794	\$7,323,857	\$282,572	233.1

¹ The statistics for 1880 are not shown, since only 2 establishments were reported, and they were not tabulated separately.

² Excludes 1 idle establishment reported in 1900.

³ Not reported separately.

⁴ Not reported.

Although the manufacture of beet sugar in the United States has been carried on continuously since 1870, it has been within the past decade only that the industry has shown indications of really being past the experimental stage. In 1879, 4 factories were in operation, as shown by the census of 1880. Only 2 establishments were reported at the census of 1890, and as these were not tabulated separately no comparison can be made.

From unofficial sources it appears that up to 1898 the greatest number of establishments in operation was 9, but according to the Census reports the number had increased to 30 by 1900 and to 51 by 1905. The industry has had its greatest period of growth from 1898 to the present time.

The capital invested in the beet sugar industry in 1880 was only \$365,000; by 1900 the amount had

increased to \$20,141,719; and in 1905 it was \$55,923,459. At the last census of manufactures there were 49 establishments that individually reported a capital greater than the total capital shown for the 4 establishments in operation in 1880. The value of products, which amounted to \$282,572 in 1880, had increased to \$7,323,857 by 1900 and by 1905 had reached the sum of \$24,393,794.

While the wage-earners in this industry were paid only \$62,271 in 1880, they received \$1,092,207 in 1900 and \$2,486,702 in 1905, in addition to which over \$11,000,000 was distributed among the farmers in the beet raising sections in payment for beets, and nearly \$2,000,000 was paid for limestone, sulphur, coke, and fuel. Most of this amount went to the people of the communities adjacent to the factories.

At the census of 1905 compared with that of 1900 (which covered the sugar campaign of 1899-1900) the number of establishments increased 70 per cent; the capital invested, 177.6 per cent; the total wages paid, 127.7 per cent; the cost of materials, 201.6 per cent; and the value of products, 233.1 per cent.

Of the 30 establishments reported at the census of 1900, 29 were controlled by incorporated companies and 1 by an individual, whereas all of the 51 plants shown by the returns for the census of 1905 were owned by corporations.

Table 2 is a statement of the number and nominal daily capacity of establishments for 1900 and 1905, by states.

TABLE 2.—Number and nominal daily capacity of establishments, by states: 1905 and 1900.

STATE.	1905 ¹		1900	
	Number of establishments.	Daily capacity (tons of beets).	Number of establishments.	Daily capacity (tons of beets).
United States.....	51	35,000	31	10,110
California.....	5	7,300	28	9,900
Colorado.....	9	6,350	1	350
Idaho.....	3	1,800	.....	.....
Illinois.....	.....	.....	1	700
Michigan.....	10	12,550	9	4,100
Minnesota.....	1	400	1	400
Nebraska.....	3	1,200	3	1,200
New Mexico.....	.....	.....	1	200
New York.....	1	600	2	400
Ohio.....	1	400	.....	.....
Oregon.....	1	350	1	350
Utah.....	4	2,850	3	1,100
Washington.....	1	400	1	350
Wisconsin.....	3	1,700	.....	.....

¹ Willett & Gray's Weekly Statistical Sugar Trade Journal.

² Includes 1 idle establishment.

In order to avoid disclosing the operations of individual establishments, in all tables showing a comparison by states for the census years 1900 and 1905 the statistics for the factories of certain states are combined under the heading "all other states." The establishments so grouped for 1900 were distributed as follows: Colorado, 1; Illinois, 1; Minnesota, 1; Nebraska, 3; New Mexico, 1; New York, 2; Oregon, 1; Utah, 3; Washington, 1. Moreover, for the purpose of pre-

serving the basis for comparison, it has been necessary to include under this head for 1905 some states for which the statistics might otherwise be given. The establishments thus shown were distributed as follows: Colorado, 9; Idaho, 3; Minnesota, 1; Nebraska, 3; New York, 1; Ohio, 1; Oregon, 1; Utah, 4; Washington, 1; Wisconsin, 3.

Table 3 is a comparative summary of the industry by states for the censuses of 1900 and 1905.

TABLE 3.—COMPARATIVE SUMMARY, BY STATES: 1905 AND 1900.

	UNITED STATES.			CALIFORNIA.			MICHIGAN.			ALL OTHER STATES. ¹		
	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.
Number of establishments.....	51	30	70.0	5	7	28.6	19	9	111.1	27	14	92.9
Capital.....	\$55,923,459	\$20,141,719	177.6	\$10,672,780	\$9,322,980	14.5	\$12,980,630	\$4,013,743	223.6	\$32,261,043	\$6,804,906	374.1
Salaried officials, clerks, etc.:												
Number.....	763	350	118.0	90	122	26.2	269	118	128.0	404	110	267.3
Salaries.....	\$1,004,636	\$356,675	181.7	\$149,030	\$117,850	26.4	\$293,500	\$101,693	188.6	\$562,106	\$137,102	310.0
Wage-earners:												
Average number.....	3,963	1,970	101.2	614	909	32.5	1,211	473	156.0	2,138	588	263.6
Total wages.....	\$2,480,702	\$1,092,207	127.7	\$429,420	\$490,072	10.6	\$581,074	\$216,704	108.1	\$1,476,208	\$395,431	273.3
Miscellaneous expenses.....	\$1,999,555	\$441,384	353.0	\$305,410	\$159,482	91.5	\$706,628	\$77,262	814.6	\$987,517	\$204,640	382.6
Cost of materials used.....	\$14,486,876	\$4,803,796	201.6	\$2,463,829	\$2,243,590	9.8	\$3,761,473	\$1,109,903	238.9	\$8,261,674	\$1,450,313	469.6
Value of products.....	\$24,393,794	\$7,323,857	233.1	\$4,415,172	\$3,499,996	26.1	\$5,378,004	\$1,602,266	235.6	\$14,600,618	\$2,221,695	557.2

¹ In 1905 includes establishments distributed as follows: Colorado, 9; Idaho, 3; Minnesota, 1; Nebraska, 3; New York, 1; Ohio, 1; Oregon, 1; Utah, 4; Washington, 1; Wisconsin, 3. In 1900 includes Colorado, 1; Illinois, 1; Minnesota, 1; Nebraska, 3; New Mexico, 1; New York, 2; Oregon, 1; Utah, 3; Washington, 1.

² Decrease.

As only one of the states reporting beet sugar manufacturing at the census of 1880 has been included in subsequent censuses, and no separate tabulation was made for the two factories reported at the census of 1890, it is impracticable to show the statistics for those censuses by states. If it were possible to show the figures for the industry for each census since 1880, when it was first reported, some remarkable increases would be revealed. As the greatest growth has occurred since 1898, the comparison given affords a good idea of the increase.

In 1900 beet sugar was manufactured in 30 factories distributed over 11 states, while in 1905 there were 51 factories in 12 states. Two states, Illinois and New Mexico, with 1 establishment each in 1900, had no factories in operation in the year covered by the census of 1905, while Idaho and Wisconsin, with 3 establishments each, and Ohio, with 1, were reported at the present census and not in 1900.

The greatest increase in number of establishments has occurred in Michigan, the gain being from 9 in

1900 to 19 in 1905. For this state the percentages of increase, as shown in Table 3, range from 111.1 for number of establishments to 814.6 for miscellaneous expenses. Considering the large amounts paid by factories for taxes, interest, repairs on plants, and the expenses incident to field operations, the increase in miscellaneous expenses for this and other states is not out of proportion to the growth of the other items shown in the table.

In California there was a decrease from 7 factories at the census of 1900 to 5 at that of 1905; this decrease in the number of factories reporting is due to the fact that 2 establishments that were reported in operation in 1900 were idle at the time of the present census.

Other decreases for the state occurred in the number of salaried officials, clerks, etc., and in the average number of wage-earners and total wages. Notwithstanding these decreases, increases are shown for the amount of capital invested, salaries, miscellaneous expenses, cost of materials used, and value of products.

Table 4 presents statistics for the states arranged according to rank, by value of products, for 1905.

TABLE 4.—SUMMARY FOR STATES RANKED BY VALUE OF PRODUCTS: 1905.

	United States.	Colorado.	Michigan.	California.	Wisconsin. ¹	All other states. ²
Rank by value of products.....		1	2	3	6	
Number of establishments.....	51	9	10	5	3	15
Capital.....	\$55,923,450	\$15,039,588	\$12,989,630	\$10,672,786	\$2,171,698	\$14,449,757
Salaried officials:						
Number.....	763	96	269	90	47	261
Salaries.....	\$1,004,636	\$219,318	\$293,500	\$149,030	\$51,500	\$291,288
Wage-earners:						
Average number.....	3,963	1,048	1,211	614	168	922
Wages.....	\$2,486,702	\$792,916	\$581,074	\$420,420	\$90,882	\$586,410
Miscellaneous expenses.....	\$1,990,555	\$459,880	\$706,628	\$305,410	\$30,702	\$487,845
Materials used, total cost.....	\$14,480,876	\$3,822,405	\$3,761,473	\$2,463,820	\$585,370	\$3,783,793
Sugar beets:						
Tons.....	2,175,417	561,266	535,508	405,865	85,015	587,763
Cost.....	\$11,345,785	\$2,964,250	\$2,056,801	\$1,918,240	\$455,812	\$3,050,682
All other materials.....	\$3,141,091	\$928,155	\$804,672	\$545,589	\$129,564	\$733,111
Products, total value.....	\$24,393,704	\$7,198,982	\$5,378,004	\$4,415,172	\$938,384	\$6,463,252
Granulated sugar:						
Pounds.....	496,618,314	136,101,700	119,932,014	92,358,500	17,718,259	130,447,841
Value.....	\$23,493,373	\$6,892,883	\$5,184,031	\$4,267,006	\$902,130	\$6,246,717
Raw sugar:						
Pounds.....	11,223,607	4,040,342	4,031,227	1,450,400	.....	1,092,698
Value.....	\$431,229	\$153,885	\$120,109	\$51,016	.....	\$105,319
All other products.....	\$409,192	\$162,214	\$73,864	\$95,650	\$30,248	\$111,216

¹ Utah ranked fourth and Nebraska fifth, but in order to avoid disclosing the operations of individual establishments the statistics for Utah, which had 4 factories owned by 2 companies, and Nebraska, which had 3 factories owned by 2 companies, are included in those for "all other states."

² Includes establishments distributed as follows: Idaho, 3; Minnesota, 1; Nebraska, 3; New York, 1; Ohio, 1; Oregon, 1; Utah, 4; Washington, 1.

While it is intended to show the rank of states by value of products in this table, it is a noticeable fact that the same relative positions of the states are maintained with respect to capital, total wages paid, total cost of materials used, and quantity and value of granulated and raw sugars manufactured.

At the census of 1900 California was in the lead with 7 establishments and a production valued at \$3,499,996, Michigan ranked second with 9 establishments and \$1,602,266 for value of products, and Colo-

rado had 1 establishment, the product of which was not shown separately. By 1905 California had dropped from first to third place in point of production, while Michigan has retained its position in second place and Colorado has made such advances that its returns showed the largest production reported by any single state.

Table 5 presents, by states, statistics showing the number of salaried employees and wage-earners and the amounts paid in salaries and in wages for 1900 and 1905, with per cent of increase.

TABLE 5.—COMPARATIVE SUMMARY—EMPLOYEES AND WAGES, WITH PER CENT OF INCREASE, BY STATES: 1905 AND 1900.

	UNITED STATES.			CALIFORNIA.			MICHIGAN.			ALL OTHER STATES. ¹		
	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.
Number of establishments.....	51	30	.....	5	7	.....	10	9	.....	27	14	.....
Salaried officials, clerks, etc.:												
Total number.....	763	350	118.0	90	122	* 20.2	269	118	128.0	404	110	267.3
Total salaries.....	\$1,004,636	\$350,075	181.7	\$140,030	\$117,889	20.4	\$293,500	\$101,093	188.6	\$502,106	\$137,102	310.0
Officers of corporations—												
Number.....	122	48	154.2	11	11	.....	41	20	105.0	70	17	311.8
Salaries.....	\$284,781	\$114,300	149.1	\$61,730	\$30,900	54.7	\$91,007	\$33,400	174.5	\$131,384	\$41,000	220.4
General superintendents, managers, clerks, etc.—												
Total number.....	641	302	112.2	79	111	* 28.8	228	98	132.7	334	93	259.1
Total salaries.....	\$710,855	\$242,375	197.0	\$87,300	\$77,980	12.0	\$201,833	\$68,293	195.5	\$430,722	\$96,102	348.2
Men—												
Number.....	600	287	109.1	71	107	* 33.6	210	90	133.3	310	90	254.5
Salaries.....	\$702,000	\$235,057	198.3	\$83,820	\$75,637	10.8	\$105,157	\$65,700	107.0	\$423,992	\$94,314	349.5
Women—												
Number.....	41	15	173.3	8	4	100.0	18	8	125.0	15	3	400.0
Salaries.....	\$10,880	\$9,718	151.4	\$3,480	\$2,343	48.5	\$9,070	\$2,587	158.1	\$6,730	\$1,788	276.4
Wage-earners:												
Average number.....	3,963	1,970	101.2	614	900	* 32.5	1,211	473	156.0	2,138	588	263.0
Total wages.....	\$2,486,702	\$1,002,207	127.7	\$420,420	\$480,072	* 10.6	\$581,074	\$210,704	168.1	\$1,470,208	\$395,431	273.3
Men 16 years and over—												
Average number.....	3,928	1,951	101.3	606	903	* 32.0	1,205	471	155.8	2,117	577	260.9
Wages.....	\$2,472,032	\$1,085,218	127.8	\$424,771	\$477,306	* 11.0	\$578,065	\$215,834	168.1	\$1,468,590	\$392,078	274.0
Women 16 years and over—												
Average number.....	10	4	150.0	4	3	33.3	4	1	300.0	2	.....	.....
Wages.....	\$5,000	\$1,035	202.4	\$2,749	\$1,565	75.7	\$1,547	\$120	1,180.2	\$800	.....	.....
Children under 16 years—												
Average number.....	25	15	66.7	4	3	33.3	2	1	100.0	10	11	72.7
Wages.....	\$9,574	\$5,304	80.5	\$1,000	\$1,201	58.2	\$802	\$750	14.0	\$9,812	\$3,353	103.2

¹ In 1905 includes establishments distributed as follows: Colorado, 9; Idaho, 3; Minnesota, 1; Nebraska, 3; New York, 1; Ohio, 1; Oregon, 1; Utah, 4; Washington, 1; Wisconsin, 3. In 1900 includes Colorado, 1; Illinois, 1; Minnesota, 1; Nebraska, 3; New Mexico, 1; New York, 2; Oregon, 1; Utah, 3; Washington, 1.

² Decrease.

MANUFACTURES.

In 1905 compared with 1900 there were large increases in the number of people employed and in the amounts paid to them. Both the number of salaried employees and the average number of wage-earners more than doubled. The total amount paid in salaries at the census of 1905 exceeded the corresponding amount shown at the Twelfth Census by \$647,961, or 181.7 per cent. The wages paid to wage-earners of all classes increased \$1,394,495, or 127.7 per cent. The total increase in salaries and wages paid was \$2,042,456.

The number of salaried officials, clerks, etc., employed in California decreased 26.2 per cent, while the amount paid them in salaries increased 26.4 per cent. The total average number of wage-earners decreased 32.5 per cent, and the wages paid them decreased 10.6 per cent. The decrease in the number of wage-earners was for men.

For Michigan an increase of 100 per cent or over is shown for the number of each class of employees and also for the amounts paid in salaries and in wages

except children's wages. Only 2 children under 16 years were reported by the factories of this state. The greatest demand for this class of help in connection with the beet sugar industry is not in the factory but in the field, where children are employed in thinning the beets during the early stages of the growth of the plants.

In considering the number of employees and the compensation received, it should be borne in mind that the larger part of the wage-earners are employed for only a few months in the year. Some of the foremen, skilled laborers, etc., are employed for a longer time, but most of the wage-earners return to the farms or engage in other occupations after the manufacturing season closes. The average length of the campaign for the establishments in operation during the season 1904-5 was eighty-eight days.

Table 6 shows the quantity and cost of the materials used in 1900 and 1905, with the percentages of increase.

TABLE 6.—COMPARATIVE SUMMARY—QUANTITY AND COST OF MATERIALS USED, WITH PER CENT OF INCREASE, BY STATES: 1905 AND 1900.

	UNITED STATES.			CALIFORNIA.			MICHIGAN.			ALL OTHER STATES. ¹		
	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.
Number of establishments.....	51	30	.....	5	7	.....	19	9	.....	27	14	.....
Materials used:												
Total cost.....	\$14,486,876	\$4,803,796	201.6	\$2,463,829	\$2,243,580	9.8	\$3,761,473	\$1,109,903	238.9	\$8,261,574	\$1,450,313	469.6
Sugar beets—												
Tons.....	2,175,417	794,658	173.8	405,865	354,942	14.3	535,508	205,925	160.1	1,234,044	233,791	427.8
Cost.....	\$11,345,785	\$3,485,320	225.5	\$1,918,240	\$1,585,953	21.0	\$2,956,801	\$902,592	227.6	\$6,470,744	\$990,775	549.2
Limestone—												
Tons.....	161,347	64,805	148.9	33,295	32,403	2.8	37,057	15,403	140.6	90,995	16,999	435.3
Cost.....	\$351,893	(²)	.....	\$89,715	(²)	.....	\$76,405	(²)	.....	\$185,773	(²)	.....
Coke—												
Tons.....	16,585	7,519	120.6	3,549	3,274	8.4	4,231	2,079	103.5	8,805	2,166	306.5
Cost.....	\$148,721	(²)	.....	\$41,557	(²)	.....	\$25,282	(²)	.....	\$81,882	(²)	.....
Sulphur—												
Tons.....	695	149	366.4	101	51	98.0	186	40	365.0	408	58	603.4
Cost.....	\$30,408	(²)	.....	\$3,221	(²)	.....	\$7,738	(²)	.....	\$19,449	(²)	.....
Fuel, cost.....	\$1,225,015	\$453,036	170.4	\$180,582	\$253,185	28.7	\$338,748	\$90,969	272.4	\$705,685	\$108,882	548.1
All other materials, including freight.....	\$1,385,054	\$865,440	60.0	\$230,514	\$404,442	43.0	\$356,499	\$116,342	206.4	\$798,041	\$344,656	132.1

¹ In 1905 includes establishments distributed as follows: Colorado, 9; Idaho, 3; Minnesota, 1; Nebraska, 3; New York, 1; Ohio, 1; Oregon, 1; Utah, 4; Washington, 1; Wisconsin, 3. In 1900 includes Colorado, 1; Illinois, 1; Minnesota, 1; Nebraska, 3; New Mexico, 1; New York, 2; Oregon, 1; Utah, 3; Washington, 1.

² Not reported separately in 1900; values included in "all other materials."

³ Decrease.

The increase in the total cost of materials used in California was only 9.8 per cent, while the increase for Michigan was 238.9 per cent, and that for the United States as a whole 201.6 per cent. The total quantity of beets used increased 173.8 per cent and the cost 225.5 per cent. Their average cost per ton in 1900 was \$4.39, while the corresponding cost shown by the reports for the census year 1905 was \$5.21 per ton, an increase of 82 cents per ton, or 18.7 per cent.

In 1905 compared with 1900 the quantity of beets used in California increased 14.3 per cent and the value 21 per cent, while the cost per ton advanced from \$4.47 to \$4.73.

For Michigan the quantity of beets increased 160 per cent and the cost 227.6 per cent; while the price paid per ton increased from \$4.38 to \$5.52.

Since the amounts expended for limestone, coke, and sulphur were not shown separately in the reports of the Twelfth Census, no comparison of these items can be made for the two census years. The cost of fuel, which is one of the principal items of expense in the manufacture of beet sugar, increased 170.4 per cent for the United States. The decreases in this item, and in the cost of all other materials for California, are due to the smaller number of establishments reporting at this census.

Table 7 presents statistics showing the acreage, quantity, and cost of beets raised, by states, as reported by the factories, with percentages of increase, for 1900 and 1905.

TABLE 7.—COMPARATIVE SUMMARY—ACREAGE IN BEETS, AND QUANTITY AND COST OF BEETS USED, WITH PER CENT OF INCREASE, BY STATES: 1905 AND 1900.

	UNITED STATES.			CALIFORNIA.			MICHIGAN.			ALL OTHER STATES. ¹		
	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.
Number of establishments ..	51	30	.....	5	7	.....	10	9	.....	27	14	.....
Beets:												
Acreage.....	240,757	135,305	77.9	33,473	63,878	247.6	85,350	37,034	130.5	121,934	34,393	254.5
Tons.....	2,175,417	794,658	173.8	405,865	354,942	14.3	535,508	205,925	160.1	1,234,044	233,701	427.8
Cost.....	\$11,345,785	\$3,485,320	225.5	\$1,018,240	\$1,585,053	21.0	\$2,056,801	\$902,592	227.6	\$6,470,744	\$996,775	540.2
Grown directly by factory—												
Acreage.....	20,484	10,230	100.1	5,410	7,526	228.0	7,653	28	27,232.1	7,412	2,085	176.0
Tons.....	169,839	23,241	630.8	57,774	10,645	442.7	41,120	218	18,705.1	70,930	12,378	473.1
Cost.....	\$304,048	\$93,898	820.8	\$282,569	\$42,718	561.5	\$231,192	\$511	45,143.1	\$350,887	\$50,600	592.5
Grown by tenants of factory—												
Acreage.....	20,223	13,074	54.7	8,787	12,762	231.1	4,300	.....	.....	7,136	312	2,187.2
Tons.....	210,247	95,071	121.1	100,853	93,294	14.5	25,540	.....	.....	77,854	1,777	4,281.2
Cost.....	\$908,333	\$430,470	131.9	\$476,395	\$422,704	12.7	\$136,361	.....	.....	\$385,577	\$7,775	4,859.2
Grown by contract by others than tenants of factory—												
Acreage.....	200,050	111,092	78.6	19,267	43,590	255.8	73,397	37,006	98.3	107,386	31,396	242.0
Tons.....	1,705,331	870,340	165.4	241,238	251,003	23.9	498,842	205,707	127.0	1,085,251	219,630	394.1
Cost.....	\$9,482,804	\$2,900,943	220.2	\$1,159,270	\$1,120,531	3.5	\$2,689,248	\$902,081	187.0	\$5,734,280	\$938,331	511.1
Average quality of beets used:												
Per cent of sucrose.....	15.0	14.3	.....	15.1	15.9	.....	14.3	13.3	.....	15.3	13.6	.....
Per cent of purity.....	83.2	81.2	.....	80.6	81.2	.....	84.2	82.9	.....	83.7	79.7	.....

¹ In 1905 includes establishments distributed as follows: Colorado, 9; Idaho, 3; Minnesota, 1; Nebraska, 3; New York, 1; Ohio, 1; Oregon, 1; Utah, 4; Washington, 1; Wisconsin, 3. In 1900 includes Colorado, 1; Illinois, 1; Minnesota, 1; Nebraska, 3; New Mexico, 1; New York, 2; Oregon, 1; Utah, 3; Washington, 1.

² Decrease.

The area contracted for in 1904 was 240,757 acres, an increase of 77.9 per cent over the 135,305 acres reported at the Twelfth Census. At the census of 1900 the yield of beets amounted to 794,658 tons, or an average of 5.87 tons per acre on the acreage contracted for. As a result of the poor yield in that year, however, over 30,000 acres were not harvested. The total acreage contracted for at the present census yielded 2,175,417 tons, or an average of 9.04 tons per acre. This yield for the United States is much lower than the average for European countries and also much lower than the average for several individual states.

In California 33,473 acres were contracted for in the census year 1905 and the production was 405,865 tons, or an average yield of 12.12 tons per acre. The acreage contracted for in the year covered by the Twelfth Census was 63,878 acres and the production reported amounted to 354,942 tons, the average being 5.56 tons per acre. This apparently large difference in yield per acre for the two censuses is partially accounted for by the fact that the season for which the statistics are shown at the census of 1905 was an exceptionally good one for growing beets in California, while the crop of 1899, which is the one reported at the census of 1900, was far below the average for previous years.

In 1905 Colorado reported 49,980 acres, with a production of 561,266 tons, or an average of 11.23 tons per acre.

The production reported for Michigan was for the crop of 1903. This was an unfavorable year in Michigan, on account of the excessive rainfall early in the season and again at harvesting time, and the figures for that year could scarcely be considered a fair average of what the state can produce under favorable weather conditions. The schedules for this state show 85,350 acres contracted for, and a yield of 535,508 tons, or 6.27 tons per acre.

When the total acreage and the total yield per acre for the United States are considered, it is seen that the beets grown by tenants of the factories yielded 10.4 tons per acre and were 9.7 per cent of the total crop, those grown by contract by others than tenants of the factories yielded 8.97 tons per acre and amounted to 82.5 per cent of the whole crop, and those grown directly by the factories yielded 7.55 tons per acre and formed 7.8 per cent of the total.

The tendency among the factories is to contract for as much of the crop as possible among the independent farmers, encouraging them by giving practical instruction and advice as to planting and growing the beets, rather than to have a large acreage of beets grown directly by the factory.

The percentage of sucrose and the coefficient of purity were higher in every state, with the exception of California, in 1905 than in 1900. In Michigan 8 of the 19 factories purchased part of their beets at a fixed rate, but all the factories in the state purchased the bulk of their beets on the basis of an analysis, paying \$4.50 per ton for beets containing 12 per cent of

sucrose, with 33½ cents per ton increase, or decrease, for each 1 per cent above or below 12 per cent. In Colorado beets were purchased at \$5 per ton, loaded on the cars at the nearest switch. In California 3 factories purchased beets at a fixed price, and 2 paid for their beets on the basis of an analysis. In Wisconsin the price was \$4.50 per ton for beets containing 14 per cent of sucrose, with 25 cents additional for each 1 per cent above that proportion.

In 6 of the remaining states a fixed rate was paid,

and in the other 2 the beets were paid for on the basis of an analysis. In one case a difference of 25 cents per ton was made between beets delivered on cars and beets delivered by wagon. One factory paid a small bonus for beets delivered at specified times, and several factories added 25 cents to the regular price for pitted beets.

The comparison of products by states shown in Table 8 affords an interesting study of the growth of the beet sugar production between 1900 and 1905.

TABLE 8.—COMPARATIVE SUMMARY—QUANTITY AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY STATES: 1905 AND 1900.

	UNITED STATES.			CALIFORNIA.			MICHIGAN.			ALL OTHER STATES. ¹		
	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.	1905	1900	Per cent of increase.
Number of establishments.....	51	30	.....	5	7	.....	19	9	.....	27	14	.....
Products, total value..	\$24,393,794	\$7,323,857	233.1	\$4,415,172	\$3,499,996	26.1	\$5,378,004	\$1,602,266	235.6	\$14,600,618	\$2,221,595	557.2
Granulated sugar:												
Pounds.....	496,618,314	115,686,356	329.3	92,358,500	43,830,911	110.7	119,932,014	32,737,098	266.3	284,327,800	39,109,347	627.0
Value.....	\$23,493,373	\$5,580,527	321.0	\$4,267,606	\$2,040,726	105.2	\$5,184,031	\$1,561,100	232.1	\$14,041,736	\$1,069,701	612.9
Raw sugar:												
Pounds.....	11,223,607	47,771,719	*76.5	1,459,400	42,901,802	*96.6	4,031,227	971,185	315.1	5,732,980	3,898,732	47.0
Value.....	\$431,229	\$1,642,054	*73.7	\$51,916	\$1,440,592	*96.4	\$129,109	\$39,184	206.5	\$259,204	\$162,278	59.7
Molasses:												
Gallons.....	9,609,542	*3,551,856	170.6	2,759,500	*1,708,501	61.5	1,081,131	321,100	236.7	5,768,911	1,522,255	279.0
Value.....	\$221,097	\$25,102	789.8	\$52,491	(0)	.....	\$21,741	\$1,225	1,674.8	\$146,865	\$23,877	515.1
Beet pulp.....	\$202,070	\$21,822	826.0	\$32,353	\$6,968	364.4	\$45,414	\$241	18,744.0	\$124,298	\$14,613	750.6
All other products.	\$46,025	\$54,352	*15.3	\$10,801	\$2,710	298.6	\$6,709	\$516	1,200.2	\$28,515	\$51,126	*44.2

¹In 1905 includes establishments distributed as follows: Colorado, 9; Idaho, 3; Minnesota, 1; Nebraska, 3; New York, 1; Ohio, 1; Oregon, 1; Utah, 4; Washington, 1; Wisconsin, 3. In 1900 includes Colorado, 1; Illinois, 1; Minnesota, 1; Nebraska, 3; New Mexico, 1; New York, 2; Oregon, 1; Utah, 3; Washington, 1.

*Decrease.

²Includes quantities for which no value was given, also wastage.

³Not reported.

In 1905 compared with 1900 the aggregate value of all products increased from \$7,323,857 to \$24,393,794, or 233.1 per cent. The quantity of granulated sugar increased 329.3 per cent, and the average selling price was slightly lower than that reported in 1900. The quantity of raw sugar reported decreased 76.5 per cent, principally because of the large falling off of this item in California.

The very large increases in the values reported for molasses and beet pulp are directly traceable to the increased use of these articles as stock food.

Table 9 gives the commercial sugar production of the world from 1853 to 1905, subdivided so as to show separately the amounts derived from cane and beets and the percentage which each was of the total crop.

TABLE 9.—Commercial sugar production of the world: 1853-54 to 1904-5.¹

YEAR. ²	TONS. ³			PER CENT.	
	Total.	Cane.	Beet.	Cane.	Beet.
1853-54.....	1,420,558	1,219,558	201,000	85.9	14.1
1854-55.....	1,381,817	1,202,817	179,000	87.0	13.0
1855-56.....	1,413,498	1,176,498	237,000	83.2	16.8
1856-57.....	1,509,214	1,259,214	250,000	83.4	16.6
1857-58.....	1,602,253	1,300,253	302,000	78.2	21.8
1858-59.....	1,893,504	1,510,504	383,000	79.8	20.2
1859-60.....	1,674,310	1,201,310	383,000	77.1	22.9
1860-61.....	1,841,264	1,490,264	345,000	81.3	18.7
1861-62.....	2,006,226	1,601,226	405,000	79.8	20.2
1862-63.....	1,944,103	1,486,103	458,000	76.4	23.6
1863-64.....	1,800,064	1,433,064	436,000	76.7	23.3
1864-65.....	1,958,413	1,417,413	541,000	72.4	27.6
1865-66.....	2,168,872	1,488,872	680,000	68.6	31.4
1866-67.....	2,022,407	1,378,407	644,000	68.2	31.8
1867-68.....	2,204,871	1,636,096	628,775	72.3	27.8
1868-69.....	2,233,130	1,585,309	647,821	71.0	29.0
1869-70.....	2,495,285	1,662,239	833,046	66.6	33.4
1870-71.....	2,527,181	1,599,488	927,693	63.3	36.7
1871-72.....	2,650,693	1,791,184	859,479	67.6	32.4
1872-73.....	2,965,329	1,840,986	1,124,343	62.1	37.9
1873-74.....	2,857,612	1,711,763	1,145,849	59.9	40.1
1874-75.....	2,922,017	1,756,081	1,165,936	60.1	39.9
1875-76.....	3,043,749	1,692,828	1,350,921	55.6	44.4
1876-77.....	2,766,270	1,682,531	1,083,739	60.8	39.2
1877-78.....	3,114,273	1,715,900	1,398,373	55.1	44.9
1878-79.....	3,515,266	1,965,990	1,549,276	55.9	44.1
1879-80.....	3,334,268	1,903,316	1,430,952	57.1	42.9
1880-81.....	3,648,847	1,902,346	1,746,501	52.1	47.9
1881-82.....	3,847,698	2,016,084	1,831,614	52.4	47.6
1882-83.....	4,217,142	2,104,072	2,113,070	49.9	50.1
1883-84.....	4,871,079	2,547,531	2,323,548	52.3	47.7
1884-85.....	5,069,255	2,502,047	2,567,208	50.8	49.2
1885-86.....	4,888,340	2,702,850	2,185,490	55.3	44.7
1886-87.....	5,513,278	2,805,735	2,707,543	50.9	49.1
1887-88.....	5,084,981	2,642,000	2,442,981	52.0	48.0
1888-89.....	5,224,379	2,480,700	2,743,679	47.5	52.5
1889-90.....	6,054,209	2,475,800	3,578,409	40.9	59.1
1890-91.....	6,524,609	2,808,900	3,655,709	44.0	56.0
1891-92.....	6,683,497	3,231,561	3,451,936	48.3	51.7
1892-93.....	6,431,009	3,045,186	3,386,423	47.3	52.7
1893-94.....	7,379,862	3,581,621	3,848,241	47.9	52.1
1894-95.....	8,247,553	3,510,670	4,736,883	42.6	57.4
1895-96.....	7,056,401	2,809,477	4,246,924	39.8	60.2
1896-97.....	7,718,270	2,841,857	4,876,423	36.8	63.2
1897-98.....	7,600,068	2,864,255	4,735,813	37.4	62.6
1898-99.....	7,931,275	2,965,438	4,965,837	37.8	62.2
1899-1900.....	8,560,109	3,056,204	5,503,915	35.7	64.3
1900-1901.....	9,018,333	3,646,059	5,372,274	37.9	62.1
1901-2.....	10,895,588	4,078,944	6,816,644	37.4	62.6
1902-3.....	9,804,339	4,144,453	5,659,886	42.3	57.7
1903-4.....	10,333,674	4,244,206	6,089,468	41.1	58.9
1904-5.....	9,552,035	4,029,987	4,922,698	48.5	51.5

¹ The statistics for the cane sugar production prior to 1888-89 are taken from trade circulars of Messrs. Rueb & Co., as reprinted in British official reports on the sugar trade (Returns No. 325 of 1884 and No. 172 of 1889). Statistics for 1874-75 to 1880-81 have been increased by adding the exports from Hawaii, which were not included in Rueb's estimates prior to 1881-82. Beginning with 1888-89 the statistics for cane sugar are taken from Willett & Gray's Weekly Statistical Sugar Trade Journal, the returns for each of the first three years being increased 200,000 tons to allow for the product of countries not included prior to 1891-92. Beet sugar statistics for Europe since 1865-66 are Licht's figures, taken from Sugar Cane and the International Sugar Journal, and for the years 1853-54 to 1865-66, inclusive, from Jules Helot's *Le Sucre de Betterave en France*, page 209. The statistics for the United States beet sugar for 1891-92 to 1894-95 are taken from the annual reports of the Commissioner of Internal Revenue; for 1897-98, from a special report of the Department of Agriculture; for 1899-1900, from the Twelfth Census; and for other years, from Willett & Gray, as cited in Bulletin 30 of the Department of Agriculture, "International Sugar Situation."

² Prior to 1888-89 the statistics for cane sugar refer to calendar years, but are given as if by campaigns, in order to compare with the beet sugar statistics. In the production of cane sugar, the figures for the calendar year in which the beet sugar campaign ends are taken as the figures for that campaign; for instance, the production of cane sugar for the calendar year 1854 is given for the campaign of 1853-54.

³ Tons of 2,240 pounds.

In 1853-54 the world's production of sugar was 1,420,558 long tons, of which 201,000, or 14.1 per cent, were accredited to the beet. The increase from this source has been steady and rapid. In 1899-1900 the world's production was 8,560,109 long tons, of which 3,056,294, or 35.7 per cent, were from cane and 5,503,815, or 64.3 per cent, from beets. In 1904-5 the production of beet sugar was 51.6 per cent of the total crop. Between 1853 and 1905 the production of cane sugar increased 279.6 per cent, and in the same time the production of beet sugar increased 2,349.1 per cent.

More than 50 per cent of the world's production has been taken from beets during each campaign since 1888-89.

By-products.—The utilization of by-products is one of the leading factors in the contest in all parts of the world between cane and beets as a source of sugar, and the time is coming when the use of these by-products will constitute one of the principal sources of income for beet sugar factories.

Laws in many of the European countries exempt from taxation the pulp and molasses of beet sugar factories when they are to be used for cattle feed, and in this country the use of this portion of the factory product is being developed to a limited extent. In several of the states where formerly all the beet pulp was wasted, being disposed of in many cases at considerable expense, there is now a good demand for it at from \$1 to \$1.50 per ton. When it is realized that from 50 to 75 per cent of the weight of beets used by a factory is turned out as beet pulp, it will be seen that the yield in suitable stock food from a crop of over 2,000,000 tons, such as was reported at the present census, is no inconsiderable item.

The amount realized from the sale of beet pulp in 1905 was \$202,070. Estimating the output of pulp from the past season's crop at one-half the weight of the beets, it should have brought over \$1,500,000. If the stock raisers of this country were properly impressed with the food value of the pulp, there would be a demand for every ton of it, as there is each year in Germany and other foreign beet raising countries. In the Western states large numbers of cattle, sheep, etc., are being fed on the pulp from the factories, and in some cases on the pulp and molasses combined, and the splendid results now being produced because of the use of this feed will greatly impress the farmers and stock raisers with its value. One of the reasons why pulp has not been used more extensively for feeding is that sugar factories are often established in districts where cattle are not extensively kept and consequently the demand for the pulp is small.

The excessive weight of the pulp has prevented its being shipped any great distance, and as a result has limited its use as feed. Recently factories have been established which dry the pulp and work it up into a high class stock food. Not only is the weight greatly reduced in this way, but the nutritive elements are increased and the product is made available for shipment and for storing like corn, cottonseed meal, bran, and other kinds of stock foods.

The beet juice is used extensively for the purpose of making alcohol, and with the prospects of the increased use of lime cake for fertilizers and lime cake and asphalt for pavements, etc., the future looks bright for the by-products of the factories.

Bounties.—In addition to the bounty provided for under the tariff act of 1890, most of the states in which

beet sugar factories have been started have, at some stage of the industry, made provision for state bounties to be paid on the amount of sugar manufactured. In a great many states the laws that provide for this bounty have been declared unconstitutional or have been repealed by succeeding legislatures. In the state of Nebraska no less than three different legislatures passed acts providing for a bounty, but in each case the next legislature either repealed the act or failed to make any appropriation for the payment of the bounty. In Michigan a bounty law was passed which was the main cause of the building of several of the factories in that state; however, when these factories presented their claims to the state auditor he refused to pay the bounty. The matter was carried through the higher courts of the state and the action of the auditor was sustained. Action similar to this was taken by the auditor in the state of Idaho, and the matter is now before the courts of that state. The law in that state provides that the bounty shall cease after the year 1904.

Bounties were paid in Minnesota in 1898 and 1899, but in 1900 payment was refused on the ground that the bounty law was unconstitutional. The law of New York provides for the payment of one-half of a cent per pound on all beet sugar produced in the state in 1904. Utah made appropriations for the payment of sugar bounties for two seasons, but no bounties have been paid for a number of years.

In Kansas, Iowa, South Dakota, Indiana, Pennsylvania, Illinois, and several other states, bounty laws have been passed, and in some cases bounties have been paid, but the practice is becoming obsolete.

Congress has provided for the free entry into this country of beet sugar machinery of foreign manufacture, and in addition has made appropriations that enable the Department of Agriculture to conduct investigations and experiments relative to the beet sugar industry.

HISTORICAL.¹

Although experiments were made in this country as early as 1830, the first successful factory was erected in 1870, so the manufacture of beet sugar as an American industry can be said to date from this latter year.

Of the attempts before that year, the first one recorded was made in 1830, when a small factory was erected in Philadelphia, Pa. In the one year during which the establishment was in operation a few hundred pounds of sugar were produced. In 1837 a factory was erected in Northampton, Mass., but it proved to be a failure and was abandoned about 1840. The next attempt was made in 1852-53, in a factory purchased in England and moved to Utah, but there was no successful production of beet sugar in this country

until 1889. The next factory was erected at Chatsworth, Ill., in 1863. This factory was operated with indifferent success until 1870, when it finally failed. It was then moved to Freeport, Ill., where it was operated for one year, after which it was moved to Black Hawk, Wis. Its career in Wisconsin was short; after one year the enterprise failed and later part of the machinery was removed to California. Other factories were attempted in various states during the next few years, but all failed or were discontinued for various reasons.

No production of beet sugar was reported at any census previous to 1880, when 4 establishments were shown—2 in California, 1 in Delaware, and 1 in Maine. Of these 4 all but 1—the plant at Alvarado, Cal.—afterwards failed, and in 1890 only 2 establishments were reported, both of which were located in California. The reports of the Twelfth Census show 30 establishments in 11 states, and the present census covers 12 states and 51 establishments. These factories are scattered all the way from New York to California, and while only 12 states reported factories it must not be supposed that these are the only states capable of successful beet sugar production, or that all available beet growing areas in them have been utilized. In 1905 sugar beets were grown in 2 states which had no factories, and experience has shown that there are numbers of others which have the soil and climatic conditions necessary to successful beet cultivation.

The following is a brief summary of the history of the beet sugar industry and conditions surrounding it in the states producing the greater part of the total production reported at the present census:

California.—In 1900 this state ranked first in point of production, but in 1905 it stood third. This lower rank, however, is probably only a temporary condition of affairs, since 2 large factories in the state were idle during the census year and many new beet sugar projects were under contemplation.

In California there is a larger acreage that is well adapted to the growing of sugar beets than is found in any other state in the Union. Moreover, California has had about thirty-five years of experience in the industry.

The oldest successful factory in the United States is located in California, and in this state is also the largest sugar factory in this country and one of the largest in the world. Many of the factories that suffered from lack of rainfall have had to resort to the system of irrigation. When this system is fully installed a greatly increased production may be confidently expected.

Although 12.12 tons was the average yield per acre for the state the past year, individual crops have been reported that run as high as 20 and 25 tons, producing a gross income to the farmer of over \$100 per acre. The factories of the state have a total combined capital of over \$10,000,000, and last season they reported

¹ Much of the historical data contained in this text has been obtained from the yearly reports of the Department of Agriculture on Progress of the Beet Sugar Industry in the United States.

an expenditure of over \$3,000,000 for labor and supplies and the sale of over \$4,000,000 worth of sugar.

Colorado.—Millions of dollars of capital have been invested in the beet sugar industry in Colorado during the last few years. In 1896 the state experiment station began the extensive experiments which resulted in the building of a factory at Grand Junction in 1898. From this beginning the industry has grown in seven years to such an extent that at the present time Colorado ranks first of all the beet raising states in amount of capital invested, tonnage of beets raised, and value of products. At the census of 1900, 1 beet sugar factory was reported from this state, and at the census of 1905 there were 9 large factories in operation. These factories turned out over \$7,000,000 worth of sugar and distributed over \$1,000,000 in salaries and wages, and over \$4,000,000 for supplies and miscellaneous expenses.

Extensive experiments in feeding cattle and sheep on the beet pulp are being carried on, and this branch of the industry is further advanced in Colorado than in any other state at the present time.

Beets are grown almost entirely by irrigation in this state. The average yield for the state last season was 11.23 tons per acre from a total of 49,980 acres. Fall rains and snows caused a partial second growth in portions of the state, thus reducing the quality of the beets.

Michigan.—The history of the beet sugar industry affords but few more striking examples of rapid progress than is furnished by the state of Michigan. The first factory in the state was built in 1898 and handled a crop of beets from 2,500 acres of ground. Two years later the Twelfth Census was taken, and Michigan reported 9 factories in operation, 37,034 acres devoted to the cultivation of beets, and a yield of 205,925 tons. At the time of the present census 19 factories were in operation, 85,350 acres of ground were cultivated, and 535,508 tons of beets were grown. As the crop in Michigan for the year covered by this report was injured by excessive rains, the yield should not be considered a fair average for a series of years. While many failures, both in factories and among the farmers, have been reported from the state, the industry is firmly established and is making rapid progress.

The state is within easy reach of the large markets of the country and has splendid transportation facilities, both by rail and by water. Some of the factories have express service over the interurban electric railroads of the state, and one factory alone reported the receipt of over 10,000 tons of beets over these lines during the previous year.

The utilization of the factory by-products has received considerable attention in this state. One plant at Bay City purchases the beet juice from a great many of the factories and uses it in making alcohol. Another establishment buys the lime cake

from beet sugar factories, mixes it with asphalt, and manufactures it into paving blocks. The beet pulp is being used for feeding purposes, and the amount realized from the sale of this article in the census year shows a large increase over the amount reported for similar sales at the Twelfth Census.

Utah.—The attention of the people of Utah was attracted to the question of beet sugar factories as early as 1852, and in that year a factory was purchased in England and shipped to Utah. It arrived in 1853 and was erected at Provo, but no sugar was manufactured. It was not until 1889 that the first successful factory was erected.

Utah has the distinction of having been the first locality in the world to make the experiment of growing sugar beets by irrigation. The continued success of the sugar industry for a number of years has shown that, with irrigation, there is little to fear from change of seasons or irregularity in crop conditions. Because of the certainty of the proper amount of moisture from the irrigation ditches at the right period, the farmers are practically independent of rainfall, and it is possible to estimate almost the exact tonnage that will be produced on a given area of land. These ideal conditions insure a continuation of the prosperity that the factories in the state are at present enjoying.

The factories in Utah have solved the problem of delivery of most of their beets to the factory by wagon or railroad. Slicing stations have been established at several points from 12 to 25 miles distant from a factory, and these are connected with the central factory by pipe lines. The beets from the neighboring country are received at these slicing stations, and after the juice has been extracted it is treated with a composition of lime for purposes of preservation and then forced through the pipes to the factory.

In order to avoid revealing the operations of individual establishments, no detailed data regarding the operations of the factories of Utah for the census year can be given separately.

Nebraska.—The first beet sugar factory in Nebraska was erected in 1890 at Grand Island, and was followed by two more, located at Norfolk and Leavitt. The statistics of these factories were included in those for "all other states," both at the Twelfth Census and at the present census. There has been no increase in the number of factories since 1900, but there has been an increased growth of beets each season for several years. With the development of irrigation projects which have been started in the western part of the state, the chances for still greater production are good.

Wisconsin.—Although experiments were made with beet sugar factories in Wisconsin as far back as 1871, it has only been of recent years that the industry has been firmly established. In 1905 there were 3 factories in operation in the state, with a combined capital of \$2,171,698. During the year they distributed

\$773,550 for labor, materials, and miscellaneous expenses, and had a total production valued at \$938,384.

Other states.—In 1905 Idaho reported 3 factories in operation, and Minnesota, New York, Ohio, Oregon, and Washington each reported 1. For each of these establishments a good production was shown.

On the whole, the industry seems to be thoroughly established in most of the states reported at this census, and the increased production is steadily reducing the amount of sugar imported from other countries.

In view of what has already been accomplished, and with the intelligence of American farmers directed toward more scientific methods of beet culture, and the ingenuity of American manufacturers constantly improving the methods of extracting the sugar from beets, it is reasonable to expect that the time is coming when the United States will be producing every pound of sugar which is consumed within its borders.

Table 10 presents, in detail, the statistics for the manufacture of beet sugar, by states, for 1905.

TABLE 10.—BEET SUGAR—DETAILED SUMMARY, BY STATES: 1905.

	United States.	California.	Colorado.	Michigan.	Wisconsin.	All other states. ¹
Number of establishments.....	51	5	9	19	3	15
Capital:						
Total.....	\$55,923,450	\$10,672,786	\$15,639,588	\$12,989,630	\$2,171,698	\$14,449,757
Land.....	\$1,737,943	\$193,903	\$838,756	\$343,898	\$22,599	\$338,757
Buildings.....	\$11,466,749	\$1,819,614	\$2,681,208	\$3,601,987	\$476,185	\$2,887,754
Machinery, tools, and implements.....	\$23,695,825	\$5,639,949	\$7,579,871	\$7,229,599	\$972,219	\$7,274,187
Cash and sundries.....	\$14,022,942	\$3,019,320	\$4,539,753	\$1,814,146	\$700,694	\$3,949,029
Salaries of officials, clerks, etc.:						
Total number.....	763	90	96	269	47	251
Total salaries.....	\$1,004,636	\$149,030	\$219,318	\$293,500	\$51,500	\$291,288
Officers of corporations—						
Number.....	122	11	11	41	4	55
Salaries.....	\$284,781	\$61,730	\$60,404	\$91,667	\$15,000	\$55,980
General superintendents, managers, clerks, etc.—						
Total number.....	641	79	85	228	43	205
Total salaries.....	\$719,855	\$87,300	\$158,914	\$201,833	\$36,500	\$235,308
Men—						
Number.....	600	71	83	210	41	195
Salaries.....	\$702,969	\$83,820	\$157,614	\$195,157	\$35,300	\$231,078
Women—						
Number.....	41	8	2	18	2	11
Salaries.....	\$16,886	\$3,480	\$1,300	\$6,676	\$1,200	\$4,230
Wage-earners, including pieceworkers, and total wages:						
Greatest number employed at any one time during the year.....	13,178	1,627	2,953	5,006	782	2,810
Least number employed at any one time during the year.....	5,675	529	1,294	1,641	770	1,441
Average number.....	3,963	614	1,048	1,211	168	922
Total wages.....	\$2,488,702	\$429,420	\$792,916	\$581,074	\$96,882	\$586,410
Men 16 years and over—						
Average number.....	3,928	606	1,039	1,205	168	910
Wages.....	\$2,472,032	\$424,771	\$788,486	\$578,665	\$96,882	\$583,228
Women 16 years and over—						
Average number.....	10	4	1	4	—	1
Wages.....	\$5,096	\$2,749	\$560	\$1,547	—	\$240
Children under 16 years—						
Average number.....	25	4	8	2	—	11
Wages.....	\$9,574	\$1,900	\$3,870	\$862	—	\$2,942
Average number of wage-earners, including pieceworkers, employed each month:						
Men 16 years and over—						
January.....	2,927	175	659	1,300	190	603
February.....	901	193	314	209	10	175
March.....	1,050	242	405	168	10	225
April.....	1,167	300	305	204	10	343
May.....	1,359	394	320	255	10	380
June.....	1,458	460	368	286	10	334
July.....	1,887	565	566	360	10	386
August.....	2,663	847	988	386	10	432
September.....	5,164	1,304	1,382	559	10	1,909
October.....	9,244	1,446	2,687	2,594	190	2,827
November.....	10,156	791	2,579	3,937	770	2,079
December.....	9,160	555	1,895	4,202	786	1,722
Women 16 years and over—						
January.....	13	—	—	13	—	—
February.....	—	—	—	—	—	—
March.....	—	—	—	—	—	—
April.....	—	—	—	—	—	—
May.....	—	—	—	—	—	—
June.....	1	1	—	—	—	—
July.....	2	2	—	—	—	—
August.....	7	3	4	—	—	—
September.....	18	11	4	—	—	3
October.....	34	22	4	5	—	3
November.....	25	9	—	13	—	3
December.....	20	—	—	17	—	3
Children under 16 years—						
January.....	9	—	—	6	—	3
February.....	1	—	—	—	—	1
March.....	—	—	—	—	—	—
April.....	—	—	—	—	—	—
May.....	—	—	—	—	—	—
June.....	—	—	—	—	—	—
July.....	—	—	—	—	—	—
August.....	16	11	5	—	—	—
September.....	51	18	8	—	—	25
October.....	83	19	28	6	—	30
November.....	70	—	28	6	—	36
December.....	70	—	27	6	—	37
Miscellaneous expenses:						
Total.....	\$1,999,555	\$305,410	\$459,880	\$706,628	\$39,792	\$487,845
Rent of works.....	\$8,675	—	—	\$8,675	—	—
Taxes, not including internal revenue.....	\$234,768	\$24,714	\$80,666	\$72,898	\$1,300	\$55,190
Rent of offices, insurance, and all other sundry expenses, not hitherto included.....	\$1,742,857	\$279,673	\$379,214	\$620,889	\$38,492	\$424,589
Contract work.....	\$13,255	\$1,023	—	\$4,186	—	\$8,066

¹ Includes establishments distributed as follows: Idaho, 3; Minnesota, 1; Nebraska, 3; New York, 1; Ohio, 1; Oregon, 1; Utah, 4; Washington, 1.

TABLE 10.—BEET SUGAR—DETAILED SUMMARY, BY STATES: 1905—Continued.

	United States.	California.	Colorado.	Michigan.	Wisconsin.	All other states.
Materials used:						
Total cost.....	\$14,486,876	\$2,463,829	\$3,892,405	\$3,761,473	\$585,376	\$3,783,793
Sugar beets—						
Tons.....	2,175,417	405,865	561,266	535,508	85,015	587,763
Cost.....	\$11,345,785	\$1,918,240	\$2,064,250	\$2,956,801	\$455,812	\$3,050,682
Limestone—						
Tons.....	161,347	33,295	44,508	37,057	6,022	40,465
Cost.....	\$351,893	\$89,715	\$107,467	\$76,405	\$9,785	\$68,521
Coke—						
Tons.....	16,585	3,549	4,086	4,231	646	4,073
Cost.....	\$148,721	\$41,557	\$30,065	\$25,282	\$3,068	\$39,149
Sulphur—						
Tons.....	695	101	256	186	18	134
Cost.....	\$30,408	\$3,221	\$12,360	\$7,738	\$787	\$6,302
Barrels, purchased as such.....	\$80,970	\$13		\$64,652	\$6,085	\$10,220
Sacks, purchased as such.....	\$424,903	\$104,028	\$134,313	\$55,027	\$12,877	\$118,658
Fuel.....	\$1,225,015	\$180,582	\$303,844	\$338,748	\$58,099	\$343,142
Mill supplies.....	\$102,897	\$14,031	\$9,555	\$34,183	\$12,513	\$32,615
All other materials.....	\$656,397	\$112,442	\$321,551	\$148,736	\$8,150	\$65,518
Freight.....	\$119,887			\$53,901	\$17,000	\$48,986
Products:						
Total value.....	\$24,393,794	\$4,415,172	\$7,198,982	\$5,378,004	\$938,384	\$6,463,252
Granulated sugar—						
Pounds.....	406,618,314	92,358,500	136,161,700	119,932,014	17,718,239	130,447,841
Value.....	\$23,493,373	\$4,297,006	\$6,892,883	\$5,184,031	\$902,136	\$6,246,717
Raw sugar—						
Pounds.....	11,223,607	1,459,400	4,040,342	4,031,227		1,692,638
Value.....	\$431,229	\$51,916	\$153,885	\$120,109		\$105,319
Molasses—						
Gallons.....	9,609,542	2,759,500	3,941,300	1,081,131	468,718	1,358,893
Value.....	\$221,097	\$52,491	\$85,541	\$21,741	\$13,748	\$42,576
Beet pulp.....	\$202,070	\$32,358	\$66,673	\$45,414	\$17,500	\$40,125
Juice, sold as such.....	\$5,129			\$5,129		
Lime.....	\$2,452	\$1,907		\$545		
Fertilizers.....	\$325	\$60				\$265
All other products.....	\$38,119	\$8,834		\$1,035		\$28,250
Power:						
Number of establishments reporting.....	51	5	9	19	3	15
Total horsepower.....	40,187	13,791	8,547	9,041	1,200	7,608
Owned—						
Engines—						
Steam—						
Number.....	274	32	47	80	9	106
Horsepower.....	35,016	10,745	7,217	8,761	925	7,368
Gas and gasoline—						
Number.....	7	3	4			
Horsepower.....	40	16	24			
Water wheels—						
Number.....	6					6
Horsepower.....	200					200
Water motors—						
Number.....	58		58			
Horsepower.....	220		229			
Electric motors—						
Number.....	184	120	33	21	6	4
Horsepower.....	4,697	3,030	1,077	275	275	40
Rented—						
Electric motors—						
Number.....	2			2		
Horsepower.....	5			5		
Acreage in beets controlled by factory:						
Total—						
Acres.....	240,757	33,473	49,980	85,350	9,700	62,254
Tons.....	2,175,417	405,865	561,266	535,508	85,015	587,793
Cost.....	\$11,345,785	\$1,918,240	\$2,064,250	\$2,956,801	\$455,812	\$3,050,682
Grown directly by factory—						
Acres.....	20,484	5,419	2,392	7,653		5,020
Tons.....	169,839	57,774	28,725	41,126		42,214
Cost.....	\$864,648	\$282,569	\$135,009	\$231,192		\$215,878
Grown by tenants of factory—						
Acres.....	20,223	8,787	2,410	4,300		4,726
Tons.....	210,247	106,853	26,099	25,540		51,755
Cost.....	\$998,333	\$476,395	\$125,397	\$130,361		\$260,180
Grown by contract by other than tenants of factory—						
Acres.....	200,050	19,267	45,178	73,397	9,700	52,508
Tons.....	1,795,331	241,238	506,442	468,842	85,015	493,794
Cost.....	\$9,482,804	\$1,159,276	\$2,703,844	\$2,589,248	\$455,812	\$2,574,624